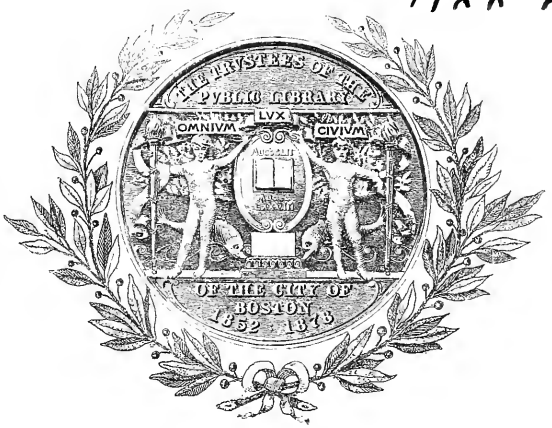


ANNUAL REPORT

OF THE

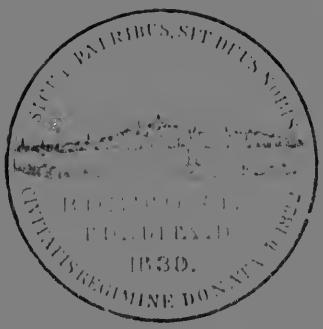
FIRE DEPARTMENT
AND WIRE DIVISION

OF THE

CITY OF BOSTON

FOR THE

YEAR ENDING JANUARY 31, 1922



CITY OF BOSTON
PRINTING DEPARTMENT
1922

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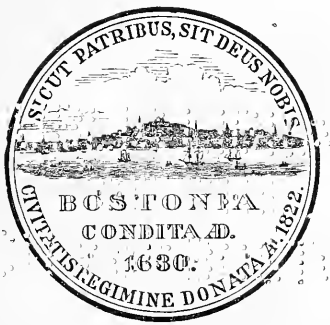
FOR THE

YEAR ENDING JANUARY 31, 1922



CITY OF BOSTON
PRINTING DEPARTMENT
1922

СЛАВЯНСКАЯ
ОБ. ЛИТ
МУЗЫКА

ANNUAL REPORT

OF THE

FIRE DEPARTMENT

FOR THE YEAR 1921–22.

February 1, 1922.

Hon. Andrew J. Peters,
Mayor of the City of Boston:

Dear Sir,— In accordance with section 24, chapter 3, Revised Ordinances of 1914, City of Boston, I have the honor to submit herewith the annual report of the Fire Department for the year ending January 31, 1922.

Finances.

The total expenditure for the department was $3,312,983.40. This amount includes the Wire Division appropriation and $22,000 from special appropriations spent in effecting alterations in the quarters of Engine Company 26–35, Mason street, and Engine Company 28, Ladder Company 10, Centre street.

The revenue of the department, including that of the Wire Division, was $50,602.29.

Fire Loss.

During the year the department responded to 5,247 alarms, of which 2,399 were box alarms. The total number of alarms was not as high as in some previous years, yet the resulting loss amounted to $4,010,201, the

greatest since 1918. While this loss seems excessive it should be borne in mind that the valuation of property and merchandise was at its peak during the past year, and this high valuation is naturally reflected in the fire loss. Furthermore the city was visited by four exceptionally serious fires during the first half of the year, as follows:

January	1.	87–93 Albany street, loss of . .	$113,136
February	21.	481–483 Neponset avenue (car house), loss of	277,532
March	4.	Amory street (car house), loss of .	369,864
June	26.	67–71 South street, loss of . .	430,501
			$1,191,033

The losses accounted for above contribute substantially to the total loss for the year.

High Pressure.

The most noteworthy achievement of the year was the placing in operation of the high pressure fire service. Pumping station No. 2, located at the Edison Electric Illuminating Company's power station on Atlantic avenue near Pearl street, was completed, accepted by the city, and put into operation by the Fire Department at 9 a. m., Monday, December 19, 1921. This date marks an epoch in the history of fire fighting in the City of Boston, for by the introduction of this system the city is provided with the latest type of fire fighting equipment, the efficiency of the Fire Department is correspondingly increased, and added protection is afforded the lives and property of our citizens.

High pressure station No. 1, located at the Lincoln power station of the Boston Elevated Railway Company, at Commercial and Battery streets, was turned over to the Fire Department and put in service on January 23, 1922.

Each of the stations has a rated capacity of 9,000 gallons per minute at 200 pounds pressure, and 6,000 gallons per minute at 300 pounds pressure. Approximately twelve miles of pipe and 310 high pressure hydrants have been installed.

The system is yet far from being completed. According to the plans there is considerable work to be done

to extend the system over the territory it is proposed to protect. Miles of pipe are yet to be laid and another pumping station must be built and equipped before the system is complete.

Motorization.

The motorization of the department has progressed gradually and consistently. Today ninety-four pieces of fire fighting apparatus are motorized as compared with eighty-five a year ago. These figures do not include chiefs' cars, delivery or emergency trucks, or apparatus in reserve. In other words the apparatus of the department in actual service is approximately 76 per cent motorized, leaving thirty pieces of horse-drawn apparatus to be displaced.

Assignment Cards.

The addition of the high pressure system together with the large amount of motor apparatus in service made it necessary and possible to revise the running card of the department. The system of response and covering of apparatus on multiple alarms was antiquated and obsolete, having been adapted for horse-drawn equipment. In order to follow the assignments outlined on the cards on multiple alarms an exceedingly large and unnecessary amount of apparatus movement resulted. The new system, completed after months of study, was put into effect December 19, 1921, coincident with the high pressure system, and by its adoption the movement of apparatus throughout the city is reduced to a minimum.

"Clean up Campaign" Trophy.

During the "Clean up Campaign" the Fire Department made a special effort to assist the committee and co-operate with the other city departments in carrying out the purposes of the campaign. Additional firemen were detailed to perform inspection work, and the department spared no effort to make the campaign a success. The City of Boston was awarded the trophy, a silver cup, for conducting the best clean up campaign in New England, and the committee in charge of the campaign testified that the work of the Fire Department was an essential factor in having the award come to Boston.

Fire Prevention.

The Bureau of Fire Prevention has performed its duties in a satisfactory manner. The work of the Bureau has increased greatly on account of the new billboard law, so-called, which requires an inspection and report on every old and new location of advertising sign. Inspections are made and reports submitted to the Massachusetts Department of Public Works, Division of Highways, with reference to the signs from a fire menace point of view.

All complaints and reports forwarded to the Bureau, after action has been taken, are followed up until the hazard is corrected, and the number of hazards corrected during the year has substantially increased. There were approximately 97,000 inspections and reinspections during the year.

Island Institutions.

Co-operating with the Institutions Commissioner the Fire Department has developed definite plans for monthly inspections of the city institutions at Deer and Long Islands. At each visit an officer of the department makes a thorough inspection of the premises, equipment and fire appliances on the islands, and gives such instructions to the employees and attendants as he thinks proper. Any serious defects are reported to the Fire Commissioner who, in turn, calls them to the attention of the Institutions Commissioner.

Water System Maps.

Plans of the water system of the city have been distributed to each of the various fire stations so that the officers and members may have an opportunity to familiarize themselves with the location of hydrants and sizes of water mains, etc., throughout the city.

Department Schools.

The Fire College, Drill School, Chauffeurs' School, Engineers' School, School for Instruction in the Care of Motor Apparatus have been successfully conducted during the year. It has been most gratifying to extend the courtesy of these schools to representatives of the fire departments of Beverly, Fall River, Lynn, Medford, Melrose, Quincy, Salem, and Lewiston, Maine. Not one, but repeated requests have been received from the

officials of these cities for permission to send representatives to our schools, and these requests reflect in a great measure the good work being conducted by the schools.

Recommendations.

Hon. John R. Murphy resigned as Fire Commissioner on November 1, 1921, and on that date, at your Honor's request, I assumed charge of the department as acting Fire Commissioner. I wish to record here the pleasure I have enjoyed in my present office. Not only have I received the co-operation and support of the heads of the various city departments, but the officials and employees of the Fire Department have offered every assistance possible to me in the administration of the affairs of the department.

While my term in the office of Fire Commissioner has been short, yet I have made certain observations which in my opinion are worthy of serious consideration. The most essential of these are noted below.

1. The telephone system used in the department at the present time is antiquated and inadequate. It has been in use for many years, the circuits are overloaded, and the service it offers for a department of such size and importance as the Fire Department is most unsatisfactory. A more modern and up-to-date telephone system should be installed as soon as possible.

2. The motorization of the department should be completed at as early a date as possible. Enough money should be set aside next year to carry out this recommendation. Provision should also be made for a sufficient amount of reserve equipment so that there will be in reserve an amount equal to 25 per cent of the apparatus in service. This reserve apparatus should consist of first-class equipment equally as good as the apparatus in service, and ready for instantaneous service.

3. The motorization of the department has brought about a condition in the Repair Shop which requires attention. Larger quarters are necessary. The present shop is overcrowded, and some plan should be devised to relieve the condition which exists. More space is needed and should be obtained as soon as possible. There is vacant land on Albany street, opposite the present shop, and fronting on Fort Point channel. An addition to the present shop in this location would centralize the repairing and storage of apparatus, and could be adapted

to take care of our fireboats, so that considerable repair work on these boats could be done by the Fire Department employees.

4. The three fireboats are coal-burning vessels. Oil burners have proven a success in boats of similar type, and from the viewpoint of economy and efficiency consideration should be given to converting the fireboats into oil burners.

5. A substantial amount should be set aside each year to provide for the renovation of the fire stations of the department. Many of the houses were erected years ago when the department was on a "call" basis, and were never adapted for the housing of permanent companies of from twelve to fifteen men. As a result living conditions in these houses are not of the best, and some effort should be made to provide pleasant and adequate accommodations for the men who are obliged to live in the fire stations.

Furthermore, the installation of motor apparatus requires certain changes in houses to eliminate the fire hazard which accompanies the storage of gasoline engines. Fireproofing the first floor is the most essential change, and other preventative measures should be adopted. Several houses require immediate attention, and a comprehensive plan to remedy these conditions should be adopted and followed.

Yours very truly,

Joseph P. Manning,
Acting Fire Commissioner.

Names of Chief or Chief Engineers, of Department, Since the Fire Department was Established January, 1826.

Samuel D. Harris	1826–28
Thomas C. Amory	1829–35
William Barnicoat	1836–53
Elisha Smith, Jr.	1854–55
George W. Bird	1856–65
John S. Damrell	1866–74
William A. Green*	1874–84
Lewis P. Webber	1884–1901
William T. Cheswell	1901–06
John A. Mullen	1906–14
John Grady*	1914
Peter F. McDonough	1914–19
Peter E. Walsh	1919

* Appointed Fire Commissioner.

REPORT OF CHIEF OF DEPARTMENT.

Boston February 1, 1922.

From: The Chief of Department.
To: The Acting Fire Commissioner.
Subject: Annual Report.

The following is the report of the Chief of Department for the year ending January 31, 1922:

During the calendar year the department responded to 5,247 alarms. The fire loss was $4,008,132, with a marine loss of $2,069, making a total fire loss of $4,010,201.

Additions and Changes.

Apparatus.

September 16, 1921, Chemical Company 1 was disbanded, the horses delivered to the Department Veterinary Hospital, apparatus placed in reserve and the members of the company reassigned.

September 16, 1921, an American-LaFrance motor-driven high pressure hose wagon was placed in service with Engine Company 4. This high pressure hose wagon is equipped with two Morse guns. There are six inlets to each gun, with nozzle tips ranging from $1\frac{1}{2}$ to $2\frac{5}{8}$ inches in diameter. This wagon has a hose-carrying capacity of 2,000 feet. By this change the horse-drawn hose wagon and two horses were displaced.

September 16, 1921, an American-LaFrance motor-driven combination hose and chemical wagon was placed in service with Engine Company 6, replacing a horse-drawn hose wagon and two horses.

October 18, 1921, an American-LaFrance motor-driven combination pumping engine and hose wagon, 750 gallons capacity, was installed in the quarters of Engine Company 30, replacing the horse-drawn steam fire engine and the horse-drawn hose wagon. The replaced apparatus was put in reserve and the horses, five in number, delivered to the Department Veterinary Hospital.

October 19, 1921, an American-LaFrance motor-driven combination pumping engine and hose wagon,

750 gallons capacity, was installed in the quarters of Engine Company 16, replacing the horse-drawn steam fire engine and a horse-drawn hose wagon and five horses.

October 28, 1921, an American-LaFrance motor-driven combination pumping engine and hose wagon, 750 gallons capacity, was installed in the quarters of Engine Company 18, replacing a horse-drawn steam fire engine and a horse-drawn hose wagon and five horses.

October 29, 1921, an American-LaFrance motor-driven combination pumping engine and hose wagon was installed with Engine Company 20, replacing a horse-drawn steam fire engine and a horse-drawn hose wagon and five horses.

October 31, 1921, an American-LaFrance motor-driven four-wheel tractor attached to a Seagrave 85-foot aerial ladder truck was installed in the quarters of Ladder Company 1, replacing an American-LaFrance motor-driven 75-foot aerial ladder truck. The replaced truck was placed in reserve.

December 10, 1921, Chemical Company 11 was disbanded, the apparatus placed in reserve and the members of the company reassigned.

December 10, 1921, Chemical Company 13 was disbanded, the apparatus placed in reserve and the members of the company reassigned.

December 10, 1921, a new engine company, known as Engine Company 52, was established in the quarters formerly occupied by Chemical Company 11 with an American-LaFrance motor-driven combination pumping engine and hose wagon, 750 gallons capacity.

December 10, 1921, a new engine company, known as Engine Company 53, was established in the quarters formerly occupied by Chemical Company 13 with a Seagrave triple combination pumping engine, 750 gallons capacity.

December 19, 1921, an American-LaFrance motor-driven combination pumping engine and hose wagon, 1,000 gallons capacity and an American-LaFrance motor-driven combination hose and chemical wagon were installed in the quarters of Engine Company 1, replacing a Seagrave motor-driven triple combination pumping engine, which was placed in reserve.

December 19, 1921, a Seagrave motor-driven triple combination pumping engine was installed in the quarters of Engine Company 2. This engine has a

rated pump capacity of 750 gallons. By this change a horse-drawn steam fire engine and horse-drawn hose wagon and five horses were displaced. The displaced apparatus was put in reserve and the horses delivered to the Department Veterinary Hospital.

December 19, 1921, an American-LaFrance motor-driven combination pumping engine and hose wagon, 750 gallons capacity and a Knox motor-driven combination hose and chemical wagon were installed in the quarters of Engine Company 14, replacing a Seagrave motor-driven triple combination pumping engine and hose wagon. This triple combination pumping engine was installed with Engine Company 53.

Chiefs' Automobiles.

During the year six new automobiles for the use of the chief officers were placed in service, displacing old ones.

Tools and Appliances.

The following new appliances were placed in service in the department as follows:

Portalites were furnished the following companies, Ladders 1, 8, 13, 17. The portalite is a portable electric spotlight with a nickel reflector and lamp which is attached to a three-cell, six-volt battery. This light is useful in illuminating dark alleys, areaways, etc.

The engine companies responding to alarms in the high pressure zone were furnished with pressure gauges for use in connection with the high pressure hydrants. Engine Companies 4, 6, 7, 8, 15, 25, 26, 35, 39 being supplied.

Fastman play-pipe holders for 3-inch hose were furnished the following companies which respond to alarms in the high pressure zone, Engine Companies 4, 6, 7, 8, 10, 25, 26, 35, 39.

The Ross Hydrant thawing device, an appliance for generating steam to thaw out hydrants, gates, etc., was placed in service with the following companies: Engines 1, 5, 14, 18, 19, 26, 28, 30, 41, 46, 53. These companies are equipped with gasolene pumping engines and heretofore had no means of thawing frozen hydrants.

Buildings.

During the year work of remodeling the quarters of Engine Companies 26–35, Mason street, was continued.

This work, which includes the addition of a third story, when finished, will adequately house these two important intown companies.

The quarters of Engine Company 28 and Ladder Company 10, Centre street, Jamaica Plain, are now being remodeled, a third story being added, which, when completed, will bring this station up to the regulations.

During the year considerable work has been done in painting the interior and exterior of the several department houses. As regards cleanliness the houses are kept in good condition.

Many houses wherein motor apparatus are quartered should be altered to comply with the regulations.

Apparatus and Equipment.

The annual inspection of apparatus and equipment, including hose, was made, and the necessary repairs made to bring same up to the proper standard of efficiency.

Building Inspection.

Weekly building inspections were made by all the officers of the fire-fighting force. These inspections invariably resulted in correcting a considerable number of hazardous conditions by verbal notice. Where it appeared that verbal notice was not sufficient to cause the remedying of the hazardous conditions, complaint in writing was forwarded to headquarters, from whence copies were forwarded to the responsible parties. This action generally produced the desired results.

Theaters and motion picture houses were inspected weekly and reports forwarded on their condition.

All public buildings and schoolhouses were inspected monthly and conditions reported.

The work of the Fire Prevention Bureau during the past year has been carried out in a very satisfactory manner. The work of the inspectors attached to this bureau, by the rigid inspections made, has, no doubt, tended materially to lessen the fire loss.

Mutual Aid.

The department responded to thirty-three (33) alarms of fire outside of the city. The usual fine spirit of co-

operation manifested by the cities and towns on our border or adjacent thereto was shown during the past year.

Schools.

Forty-two (42) recruits attended and passed the department drill school.

Twenty-two (22) members received instructions in the engineer's school. Five members of the Lynn Fire Department, and one from the Lewiston, Me., department also attended and passed this school.

Two hundred twenty-seven (227) members received instruction in the use and operation of the new high pressure hydrants.

Fourteen (14) members were instructed in the care and operation of the high pressure pumping stations.

One hundred seventeen (117) members attended and passed the motor pump school. This school was also attended by members of the fire departments of Lynn, Fall River and Beverly.

One hundred ninety-two (192) members passed the chauffeurs' school.

Ten captains attended the school of instruction conducted by the Insurance Library Association of Boston.

One hundred seventy-five (175) members attended the course of lectures at the fire college of our department. This course was also attended by officers representing the fire departments of Salem, Quincy, Medford, Melrose and Lynn.

Company Drills.

1. The annual company drills at Headquarters commenced September 21, 1921, and finished November 22, 1921. Accuracy in the performance of each evolution was the outstanding feature in these drills, hence the increase in time of performance over that of previous years. The drills were, on the whole, very satisfactorily performed, the evolutions being as follows:

1. Connect two lines, 100 feet each, from engine to deluge set.
2. Connect two lines, 100 feet each, from engine to Morse gun.
3. Raise 50-foot ladder to fourth floor window and dog same.

4. Run 200 feet $2\frac{1}{2}$-inch line over 50-foot ladder, up stairway and show pipe out fifth floor window.
5. Raise 30-foot ladder to fire escape, carry 17-foot roof ladder over same to story above. Dog 30-foot ladder.
6. Run 250 feet $2\frac{1}{2}$-inch line over 30-foot ladder, over fire escape to roof, 75 feet from ground.
7. Take life line and haul 25-foot ladder to roof 75 feet from ground.
8. Take life line, haul 200 feet $2\frac{1}{2}$-inch hose to roof.
9. Run 100 feet $2\frac{1}{2}$-inch hose from engine, connect Morse gate and Bresnan nozzle.
10. Connect chuck to hydrant (flexible suction) water to engine.

2. The following pages show the result of the drill in which all companies participated, except the three fireboat crews. These tables show the list of companies drilling, the time consumed in each evolution, and time consumed by each company in completing all evolutions.

DIVISION 1.— THIRD DEPUTY CHIEF HENRY A. FOX.

	Officers.	Men.	Evolution Number.																				Total Time.	
			1.		2.		3.		4.		5.		6.		7.		8.		9.		10.			
			M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
DISTRICT NO. 1.— DISTRICT CHIEF FITZGERALD M. O'LALOR.																								
Ladder Company 2	2	10		47		26	1	2	1	20		45	1	32	1	37		56		56		32	9	53
Engine Company 5	2	9		31		29	1	2	1	20		50	1	36	2	1		57		27	1		10	13
Engine Company 40	2	10		37		36	1	7	1	36		56	2	2	1	39	1	1		28		30	10	32
Engine Company 9	2	9		40		32	1	13	1	32		50	1	50	1	35		54		44		45	10	35
Engine Company 11	2	12		59		34	1	1	1	50		45	1	55	1	35	1	10		40		35	11	
Ladder Company 21, Chemical 7	2	9	1	16	1		2	1	1	46	1	7	1	52	1	55	1	15		40	1		13	52
DISTRICT NO. 2.— DISTRICT CHIEF, WILLIAM E. RILEY.																								
Ladder Company 22	1	7	1	11		42	1	23	1	33		56	1	38	2	11		58		43		36	11	51
Engine Company 27	2	7		52		40	1	22	1	56	1	5	2	30	2	20	1	11		49		36	13	21
Engine Company 50	2	6		54		33	1	21	2	3		55	2	7	2	31	1	14	1	21		42	13	41
Engine Company 36	2	7	1	7		42	1	37	1	51	1	5	3	26	2	9	1			28		52	14	37
Engine Company 32	2	7		43		45	1	44	2	15	1	39	2	28	2	24	1	25		50		31	14	44
Ladder Company 9	2	7		44		46	1	17	2	16	1	50	2	35	2	32	1	25		44	1	5	15	14
DISTRICT NO. 3.— DISTRICT CHIEF, CORNELIUS J. O'BRIEN.																								
Engine Company 25	1	9		54		25	1	15	1	10		50	1	30	1	46	1	29		31		41	10	31

Ladder Company 18	2	8		54		35	1	39	1	20		50	2	7	1	50	1	1		21	1		11	37
Engine Company 39	1	9		44		47	1	21	1	28	1	4	1	55	2	22		59		35		43	11	58
Engine Company 38	1	9		50		45	1	16	1	40	1	9	2	4	2	5	1	6		29		51	12	15
Rescue 1, Tower 3	2	7		49		33	1	30	1	31	1		2	10	2	6	1	23		28		50	12	20
Ladder Company 8	1	9	1	20		54	1	7	1	44		52	1	58	1	55		53		51		49	12	23
District No. 4.— District Chief, Edward J. Shallow.																										
Engine Company 8	1	8		50		27	1	13	1	25		52	1	35	2		1			32		34	10	28
Ladder Company 24, Tower 1	1	10		45		42	1	18	1	30		59	1	52	1	56		54		47		58	11	41
Ladder Company 1	1	7		50		59	1	7	1	35		45	1	56	2	4	1	7		33	1	5	12	1
Engine Company 4	1	9		55		33	1	15	1	57	1	8	2	13	2	15	1	5		35		50	12	46
Engine Company 6	2	8		55		28	1	20	2	7	1	40	2	15	2	45	1			30		42	13	42
District No. 5.— District Chief, Albert J. Caulfield.																										
Engine Company 7	2	8	1	7		37	1	14	1	39	1	2	2		2	1	1			38		50	12	8
Engine Company 26	2	8		46		35	1	20	1	55	1	13	2	20	1	55	1	9		23		40	12	16
Ladder Company 17	2	8	1		1		1	7	1	56		54	2	2	1	57		55		39		55	12	25
Engine Company 35	2	8		42		44	1	40	1	40	1	11	2	6	2	6	1	1		30		45	12	25
Engine Company 10	1	8	1	22		40	1	10	1	37		56	2	10	2	36	1	26		36		36	13	9

Company Records,— By Districts.

District No. 1.— Ladder Company 2	9 minutes 53 seconds.
District No. 2.— Ladder Company 22	11 minutes 51 seconds.
District No. 3.— Engine Company 25	10 minutes 31 seconds.
District No. 4.— Engine Company 8	10 minutes 28 seconds.
District No. 5.— Engine Company 7	12 minutes 8 seconds.

DIVISION 2.—FOURTH DEPUTY CHIEF WALTER M. McLEAN.

	Officers.	Men.	Evolution Number.																				Total Time.	
			1.		2.		3.		4.		5.		6.		7.		8.		9.		10.			
			M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
DISTRICT No. 6.—DISTRICT CHIEF, JAMES J. CAINE.																								
Engine Company 43	1	7		52		31	1	16	1	35	1	2	1	56	1	41		59		26		27	10	45
Engine Company 15	1	7		46		31	1	16	1	45	1		1	56	1	48	1	1		26		26	10	55
Engine Company 2	1	7		45		30	1	15	1	47	1		2		1	48	1	7		27		30	11	9
Ladder Company 5	2	6		58		35	1	18	1	56		56	1	38	2	10	1	4		29		56	12	
Ladder Company 20	1	7		36		41	1	20	1	46	1	18	1	54	1	58	1	16		40		37	12	6
Ladder Company 19	1	7	1	20		41	1	14	2	3	1	25	2	3	1	54	1	11		40		55	13	26
Engine Company 1	1	6	1	16	1	6	1	36	1	52	1	10	2	22	1	56	1	5		45		48	13	56
DISTRICT No. 7.—DISTRICT CHIEF, FRANCIS A. SWEENEY.																								
Ladder Company 3	1	7		40		25		51	1	23		42	1	37	1	43		51		32		28	9	12
Engine Company 22	1	7		53		35	1	16	1	32		53	1	50	1	28	1			25		30	10	22
Ladder Company 15	1	7		42		53	1	10	1	45		50	1	35	1	45		50		21		44	10	35
Engine Company 33	1	7		53		25	1	21	1	21		50	1	50	2		1			21		45	10	46
Ladder Company 13	1	8	1	7		43	1	9	1	20		45	1	30	1	50	1	35		20		40	10	59
Engine Company 3	1	7		43		36	1	32	2	15		55	1	21	1	35	1	48		21		33	11	39

District No. 8.—District Chief, Frank J. Sheeran.																								
Ladder Company 12	1	7		38	27	1	2	1	22	1	2	1	40	1	45		42		38		32	9	48
Engine Company 13	1	7		53	30	1	5	1	33	1	13	1	40	2	24	1			29		31	11	18
Engine Company 37	1	8	1		28	1	7	1	40	1	5	1	42	2	20	1			38		45	11	45
Engine Company 14	1	8	1	14	37	1	27	2		1	15	2	28	1	48	1	3		26	1	25	13	44
Ladder Company 26	1	7	1	10	38	1	28	2	35	1	25	4	7	2	15	1	6	1		1	20	17	4
District No. 11.—District Chief, James F. McMahon.																								
Engine Company 29	2	9		47	29	1	19	1	35	1		1	31	1	29		39		31		34	9	54
Engine Company 51	1	10		27	27	1	9	1	36		57	1	4	1	50		40		24		41	9	57
Ladder Company 14	1	6		40	28	1	23	1	40	1		1	33	1	51		50		26		36	10	32
Engine Company 41	1	8		39	28	1	11	1	47		53	2	10	1	45		38		30		35	10	35
Engine Company 34	2	10		50	32	1	40	1	32	1	27	2	13	2			50		28		38	12	19
Ladder Company 11	1	7	1	6	50	1	35	2		1	10	2	8	2	28		52		34		31	13	14

Company Records.— By Districts.

District No. 6.— Engine Company 43	10 minutes 45 seconds.
District No. 7.— Ladder Company 3	9 minutes 12 seconds.
District No. 8.— Ladder Company 12	9 minutes 48 seconds.
District No. 11.— Engine Company 29	9 minutes 54 seconds.

Record For Each Evolution.

Evolution No. 1.— Engine Company 51	27 seconds.
Evolution No. 2.— Ladder Company 3, Engine Company 25, Engine Company 33	25 seconds.
Evolution No. 3.— Ladder Company 3	51 seconds.
Evolution No. 4.— Engine Company 25	1.10 seconds.
Evolution No. 5.— Ladder Company 3	42 seconds.
Evolution No. 6.— Engine Company 3	1.21 seconds.
Evolution No. 7.— Engine Company 22	1.28 seconds.
Evolution No. 8.— Engine Company 41	.38 seconds.
Evolution No. 9.— Ladder Company 13	.20 seconds.
Evolution No. 10.— Engine Company 12, Engine Company 15, Engine Company 21, Engine Company 24	.26 seconds.

DIVISION 3.— THIRD DEPUTY CHIEF DANIEL F. SENNOTT.

	Officers.	Men.	Evolution Number. 1. M.	1. S.	2. M.	2. S.	3. M.	3. S.	4. M.	4. S.	5. M.	5. S.	6. M.	6. S.	7. M.	7. S.	8. M.	8. S.	9. M.	9. S.	10. M.	10. S.	Total Time. M.	Total Time. S.
District No. 15.— District Chief, Joseph A. Dolan.																								
Engine Company 49	1	7	1	48		35	3	35	2	53	1	19	2	28	2	22	1	15	1	48		48	18	51
Ladder Company 28	1	6		55		40	1	7	1	37	1	6	2	22	1	58		53		50		37	12	5
Engine Company 48	2	8		53		59	1	11	1	33		57	1	55	1	40		47		37		45	11	17
Engine Company 10	1	9		45		31	1	20	1	58	1	12	2	6	1	34		48		28		32	11	14
District No. 14.— District Chief, Allan J. Macdonald																								
Engine Company 46	2	10		50		43	1		1	19		45	1	34	1	49	1	3		38		47	10	28
Ladder Company 27	1	8		47		32	1	13	1	45		55	1	40	1	58		52		35		53	11	10
Engine Company 20 *	1	7		43		33	1	38	1	38	1	13	2	5	1	55	1	23		40		33	12	21
Engine Company 16	2	9		44		27	1	20	1	53		55	1	43	1	31		49		27		41	10	30
Ladder Company 6	1	8		58		32	1	50	1	18		55	1	33	1	55		45		34		55	11	15
District No. 13.— District Chief, Michael J. Kennedy.																								
Engine 30, Chemical 13 †	2	8		40		41	3	35	1	31		56	1	36	2	55		45		34		37	13	50
Engine Company 45	1	7		53		45	1	14	1	56	1	1	2	52	2	11	1	27		42		36	13	7
Ladder Company 25	1	8		37		47	1	17	1	24		57	1	23	1	30		55		25	1	18	10	33
Ladder Company 16	1	7		40		37	1	34	1	48		56	1	33	1	52		50		28		33	10	51

† District No. 12.— District Chief, John N. Lally.																								
Engine 28, Chemical 5	1	8		48		35	1	15	2	11	1	8	2	26	2	1	1	31		56	1	9	14	
Engine Company 42	1	8		31		42	1	47	1	31	1	10	1	41	2	9	1	24		40		39	12	14
Ladder Company 10	1	8		52		33	1	15	1	59		58	1	51	1	45		53		27		43	11	19
Ladder Company 23, Chemical 5	1	8		48		47	1	27	2	3	1	18	2		1	54	1	15		50	1	23	13	45
Ladder Company 30	1	8		41		40	1	34	1	43	1	22	2	3	1	50	1	1		28		49	12	11
District No. 10 († Chemical 11).— District Chief, Francis J. Jordan.																								
Ladder Company 29	1	8		54		49	1	32	2	14	1	14	2	4	1	55	1	4		30	1	15	13	31
Engine Company 18	1	8		45		31	1	16	1	45	1	2	1	45	2	2	1	19		25		43	11	33
Engine Company 17	1	6	1	11		59	2	10	2	8	2		2	17	2	33	1	50		41		44	16	33
Ladder Company 7	1	6	1	6		59	1	9	1	50		51	2	20	2	44	1	15		38		42	13	34
District No. 9 († Chemical 10).— District Chief, Joseph H. Kenney.																								
Engine Company 24	2	7		45	1	3	1	18	1	20		52	1	26	2	1		55		22		26	10	28
Engine Company 21	1	7		50		36	1	56	2	10	1	45	2	5	2	3		55	1	24		26	13	10
Engine Company 12	1	8		42		29	1	20	1	36	1		1	35	1	46		53		25		26	10	12
Ladder Company 4	2	10		55		38	1	29	1	37	1	55	1	38	1	31	1	27		27		38	12	15
Engine Company 23	1	7		37		32	1	18	1	26	1	16	1	53	1	50	1	35		31		39	11	37

* 1 officer, 5 men, 1 light house duty, 3 men present detailed from District 7.
† Chemical companies drilled with districts.

Company Records.— By Districts.

District No. 9.— Engine Company 12	10 minutes 12 seconds.
District No. 10.— Engine Company 18	11 minutes 33 seconds.
District No. 12.— Ladder Company 10	11 minutes 19 seconds.
District No. 13.— Ladder Company 16	10 minutes 51 seconds.
District No. 14.— Engine Company 46	10 minutes 28 seconds.
District No. 15.— Engine Company 19	11 minutes 14 seconds.

Fire Prevention Week.

During the week ending October 8, 1921, in addition to the usual inspections by district and company officers, a member from each engine and ladder company, in its subdistrict, inspected the cellars and yards of stores, and the cellars, stairways and roofs of dwelling houses containing three or more families with a view of causing the removal of combustible rubbish, obstructions to egress, etc.

The inspectors attached to the Fire Prevention Bureau also made an intensive drive throughout the "High Value District" for the purpose of causing the removal of combustible rubbish, articles blocking egress and other simple but hazardous conditions tending to create a fire menace.

Lectures on fire prevention were delivered by the officers of the department, also fire drills witnessed in the various public schools throughout the city.

On Monday, October 10, 1921, Fire Prevention Day, at various intervals throughout the day, engine and ladder companies gave a short exhibition drill, after which one of the officers addressed the gathering on the value of fire prevention. In the evening an exhibition of the flood lights used by the department at night fires and a demonstration of the Magnavox — a new amplifying device — was given at fire headquarters.

Hydrants.

The following is the number and type of hydrants in use for fire service January 31, 1922:

Ordinary post	4,091
Boston post	3,326
Lowry	1,441
Boston Lowry	595
High Pressure	310
Boston hydrant	275
B. & F. post	262
Chapman post	193
Ludlow post	* 20
Matthews post	* 4
Coffin post	* 1
Total	10,518

* Hydrants located in the Hyde Park district.

High Pressure System.

On December 19, 1921, the high pressure system was put in service, with one pumping station completed, *i. e.*, station No. 2, located in the substation of the Edison Electric Illuminating Company, Atlantic avenue, opposite Pearl street.

On January 23, 1922, station No. 1, located in the Lincoln power station of the Boston Elevated Railway Company at Commercial and Battery streets, was completed and put in service.

High pressure station 1 is equipped with two Worthington 3-stage centrifugal pumps, each directly connected to a Westinghouse steam turbine, 1,165 revolutions per minute, 175 pounds steam pressure. Each pump has a capacity of 3,000 gallons per minute at 300 pounds pressure and 4,500 gallons per minute at 200 pounds pressure.

High pressure station 2 is equipped with two Worthington 4-stage centrifugal pumps, each directly connected to a 750 horse power, 235-volt, 2,580-ampere, 1,000 revolutions per minute, direct-current Westinghouse motor. Pump capacity of 3,000 gallons per minute at 300 pounds pressure and 4,500 gallons per minute at 200 pounds pressure.

The stations are under the general supervision of the deputy chief in charge of the Bureau of Supplies and Repairs. The superintendent of repairs has direct charge of maintenance and operation. Operation is in three shifts, with an engineer and an assistant on duty in each station.

The system now has about twelve miles of pipe with three hundred ten (310) hydrants in service in the "High Value Section." The hydrants connected to the system are of a specially designed post type, opening against the pressure, with $6\frac{1}{8}$-inch valve opening and 8-inch gated connection to main. Hydrants have four $2\frac{1}{2}$-inch outlets with an independent gate on each. They are spaced on an average of 150 feet apart.

Rules governing the operation of the system have been issued to the department in general orders; additional rules will be made as situations requiring them arise. Steam fire engines and motor pumpers respond to alarms from the high pressure district as formerly, but instructions are for them not to approach within 300 feet of the building on fire if high pressure hydrants are available.

Three high pressure hose wagons respond to alarms in the district but do not go outside the zone.

On the evening of December 9, 1921, after the completion of the acceptance tests of the pumps, a trial run was conducted to demonstrate the speed with which streams from turret nozzles could be put in operation on the fire grounds, and the fact that the system was ready for fire service. Box 1257, Atlantic avenue and State street, was pulled at 9.02.30. Fifteen seconds later the alarm began to come in at the pumping stations, and on completion of the first round, 20 seconds later, one of the pumps was started at station 2. A pressure of 125 pounds was obtained at 9.04, and at 9.05.45, three minutes and fifteen seconds after the box was pulled, water came from the turret nozzles on the wagons of Engine 8 and high pressure hose wagon of Fngine 25, which had responded with other apparatus. On receipt of orders, pressures at the station were successively raised to 150 and 175 pounds.

With the installation of the high pressure system the fire protection in the congested value district has been very materially improved.

RECOMMENDATIONS.

Apparatus.

I would recommend that the following amount of motor apparatus be purchased for the year commencing February 1, 1922:

Engine Company 4, Bulfinch Street, City Proper.—One (1) 750-gallon motor-driven pumping engine to replace a horse-drawn steam fire engine and three (3) horses.

Engine Company 6, Leverett Street, City Proper.— One (1) 1,000-gallon motor-driven pumping engine to replace a horse-drawn steam fire engine and three (3) horses.

Engine Company 7, East Street, City Proper.— One (1) 1,000-gallon motor-driven pumping engine. One (1) combination hose and chemical — motor-driven. To replace a horse-drawn steam fire engine, hose wagon and five (5) horses.

Engine Company 12, Dudley Street, Roxbury.— One (1) 750-gallon motor-driven pumping engine. One motor-driven combination hose and chemical wagon. To replace a horse-drawn steam fire engine, hose wagon and five (5) horses.

Engine Company 13, Cabot Street, Roxbury.— One (1) 750-gallon motor-driven pumping engine. One (1)

motor-driven combination hose and chemical wagon. To replace a horse-drawn steam fire engine, hose wagon and five (5) horses.

Engine Company 24, Warren Street, Roxbury.— One (1) 750-gallon motor-driven pumping engine. One (1) motor-driven combination hose and chemical wagon. To replace a horse-drawn steam fire engine, hose wagon and five (5) horses.

Engine Company 29, Chestnut Hill Avenue, Brighton.— One (1) 750-gallon motor-driven pumping engine. One (1) motor-driven combination hose and chemical wagon. To replace a horse-drawn steam fire engine, hose wagon and five (5) horses.

Engine Company 34, Western Avenue, Brighton.—One (1) 750-gallon motor-driven pumping engine, to replace a horse-drawn steam fire engine, horse-drawn hose wagon and five (5) horses.

Ladder Company 2, Paris Street, East Boston.— One (1) tractor drawn 75–foot aerial ladder truck to replace a horse-drawn box truck and three (3) horses.

Ladder Company 9, Main Street, Charlestown.— One (1) tractor drawn 75-foot aerial ladder truck to replace a horse-drawn box truck and three (3) horses.

Ladder Company 23, Washington Street, Grove Hall.— One (1) tractor drawn 75-foot aerial ladder truck to replace a horse-drawn city service ladder truck and three (3) horses.

Ladder Company 27, Walnut Street, Neponset.— One (1) motor-driven city service ladder truck to replace a horse-drawn city service ladder truck and three horses.

Reserve Apparatus.

Two (2) motor-driven pumping engines.

Three (3) motor-driven combination hose and chemical cars.

One (1) tractor drawn 75-foot aerial ladder truck.

One (1) motor-driven city service ladder truck.

Fire Stations.

I would recommend that the main floors of the following fire stations wherein motor apparatus is quartered be fireproofed:

District No. 1. Engine Company 11, Ladder Company 21, one house.

District No. 2. Engine Company 36, Ladder Company 22, one house.

District No. 5.	Ladder Company 17.
District No. 6.	Engine Company 2.
District No. 7.	Engine Company 22, Ladder Company 13, one house.
District No. 8.	Ladder Company 12.
	Engine Company 37, Ladder Company 26, one house.
District No. 9.	Engine Company 21.
	Engine Company 23.
District No. 10.	Engine Company 17.
	Ladder Company 7.
District No. 12.	Engine Company 42, Ladder Company 30, one house.
	Ladder Company 23, Chemical Company 5, one house.
District No. 13.	Engine Company 45, Ladder Company 16, one house.
District No. 15.	Engine Company 19.
	Engine Company 48, Ladder Company 28, one house.

In addition to the above I would recommend that the quarters of Engine Company 4 be remodeled in anticipation of motor apparatus being installed therein. At present the high pressure hose wagon — motor-driven — is quartered there, but the construction of the quarters is not up to the regulations.

HIGH PRESSURE FIRE SERVICE.

I would recommend that the work of completing the high pressure system be carried on as rapidly as funds will permit. At the present time the system protects about $66\frac{2}{3}$ per cent of the congested value district. With the completion of the remaining $33\frac{1}{3}$ per cent of the high pressure service this section should be adequately protected against the spread of fire.

In conclusion, I wish to extend my thanks for the co-operation given me by the Boston Police Department, the Boston Protective Department, and to all other departments and corporations which rendered assistance at various times during the past year.

To the members of the department I wish to express my appreciation for the loyal and efficient manner in which they performed their several duties.

Respectfully submitted,

PETER E. WALSH,
Chief of Department.

FIRE ALARM BRANCH.

FROM: THE SUPERINTENDENT OF FIRE ALARM BRANCH.
TO: THE FIRE COMMISSIONER.
SUBJECT: ANNUAL REPORT OF FIRE ALARM BRANCH.

I respectfully submit the following report of the Fire Alarm Branch for the fiscal year ending January 31, 1922:

OPERATING DIVISION.

(NOTE.— The records of this division are for the calendar year 1921.)

BOX ALARMS RECEIVED AND TRANSMITTED.

First alarms	2,340
Second alarms	42
Third alarms	14
Fourth alarms	3
	2,399

(NOTE.— Including six alarms dispatching aid to outside cities and towns.)

BOX ALARMS RECEIVED AND NOT TRANSMITTED.

Same box received two or more times for same fire	211
Adjacent boxes received for same fire	219
	430
Received from boxes but transmitted as stills	9

STILL ALARMS RECEIVED AND TRANSMITTED.

Received from citizens (by telephone)	1,394
Received from police department (by telephone)	252
Received from fire department stations (by telephone),	1,094
Received by telephone for which box alarms were later transmitted	155
Received from department boxes, transmitted as stills,	9
Mutual Aid — adjacent cities and towns, classed as stills	28
Emergency services, classed as stills	53
	2,940

AUTOMATIC ALARMS.

Boston Automatic Company, transmitted by company to department stations	142
Department box alarms transmitted in connections with same; before automatic alarm 5, after automatic, 7	12
A. D. T. Company received at this office	46
Department boxes transmitted in connection with same, before the A. D. T. alarm, 9; after the A. D. T. alarm, 6	15
A. D. T alarms transmitted by this office	37

SUMMARY OF ALARMS.

Box alarms, including multiples	2,829
Still alarms, all classes	2,940
Boston Automatic Company, alarms	142
A. D. T. Company, alarms	46
Total received from all sources	5,957
Exclude following duplications:	
Box alarms received and not transmitted	430
Still alarms for which department box alarms were transmitted	155
Boston Automatic Company, alarms for which department box alarms were transmitted	12
A. D. T. Company, alarms for which department box alarms were transmitted	15
Total duplications eliminated	612
Total of alarms with duplications eliminated and to which department apparatus responded	5,345

FIRE ALARM BOX RECORDS.

Boxes from which no alarms were received	513
Box test and inspections	10,310

All keyless doors are tested weekly.

CONSTRUCTION DIVISION.

EXTERIOR WORK.

Fifty-five thousand three hundred and fifty-five (55,355) feet of cable was hauled into underground ducts for extension of service and to make possible the removal

of overhead wires, and about thirty-six hundred (3,600) feet of cable was installed to replace defective cable.

Thirty-three (33) new box posts; four (4) large cable test posts; two (2) small test posts and two (2) special combination posts for traffic bells and cable terminals were installed.

Three (3) box posts were moved to new locations and thirteen (13) box posts and four (4) test posts were replaced with new posts.

Seven thousand three hundred and forty-eight (7,348) feet of ducts were laid underground, and nine (9) manholes and one (1) handhole were built.

About eight (8) miles of new wire was run, principally to replace defective wire. Approximately eighteen (18) miles of old line wire was removed from poles.

Twenty-one (21) new fire alarm boxes (additional) were installed, eighteen (18) of which are public boxes. All fire alarm boxes were painted.

High Pressure Signal System.

A circuit connecting jack has been placed in each fire alarm box in the high pressure zone, and these jacks are connected into two special circuits running to the fire alarm office. Each chief officer in the department has been equipped with portable telephone and telegraph sets by which they may communicate with headquarters.

A special signal circuit connects the two pumping stations to the fire alarm office. On these special circuits, visual and audible signals are transmitted and all signals are automatically recorded.

Interior Construction.

One high pressure pumping station has been wired for light, heat and signals, and the other for lights and signals. Three department stations were re-wired completely, and many changes and additions have been made to the wiring in other stations.

Recommendations.

It is recommended that about the usual amount of underground construction be done this coming year. Many new fire alarm boxes are needed and should be installed. The red light system should be considerably extended — at least one hundred additional lights were

promised by the Public Works Department for 1921, but only a few of the promised number were installed.

Consideration should be immediately given to the construction of a new fire alarm office. There is practically no spare apparatus in the present office equipment for the extension of the system. Requirements of the National Board of Underwriters cannot be complied with because there is no room for expansion.

Considerable time and care must be given to the study and investigation of such a project; the location and type of building; the kind of apparatus to be used; the method of new outside connections, etc., will require serious and earnest consideration, and preparations should be begun at the earliest possible moment to accomplish this object.

I recommend that a new telephone system be installed to replace the present system. There is no question but that a new system would be considerably more efficient than the present one, and in addition to this fact, more than two hundred (200) miles of wire now used for telephone service would be available for fire alarm purposes.

I believe that the use of wireless telephones would be of considerable benefit if apparatus were installed in the fire alarm office and on the fire boats. With this outfit the boats could always be communicated with irrespective of their position.

Underground Cables Installed.

	Cond.	Feet.
East Boston.		
Bennington street, Breed street to Blackinton street	6	1,050
Meridian street, Condor street to bridge	4	1,800
Charlestown.		
Warren avenue and Rutherford avenue, Front street to Devens street	6	1,466
Rutherford avenue and Cambridge street, Chapman street to railroad bridge	6	5,385
Chapman street, Rutherford avenue to Lynde street	6	661
Warren Bridge, submarine cable	19	280
City Proper.		
Commercial street, Richmond street to Battery street	10	2,040
State street, Commercial street to Kilby street	10	850

	Cond.	Feet.
Tremont street, Eliot street to Van Rensselaer place	10	210
Providence and Berkeley streets, Park square to Newbury street	10	2,300
Atlantic avenue, Pearl street to Congress street, Congress street, Purchase street to Dorchester Avenue	10	1,264
West and Mason streets, Engine house 26–35 to Washington street	6	524
Clarendon street, Stuart street to Stanhope street	4	440
Post and building connections	37	80
Post and building connections	20	235
Post and building connections	10	866
Post and building connections	6	419
South Boston.		
Post connection	10	25
Dorchester.		
Fremont street, Blue Hill avenue to Babson street, Babson street, Fremont street to Engine house 19	37	610
Roach street, Dorchester avenue to Pleasant street	10	532
River street, Blue Hill avenue to Malta street	10	1,759
Neponset avenue, Victory road to Walnut street	10	5,875
Savin Hill avenue, Dorchester avenue to Pleasant street	4	700
Post and pole connections	19	135
Post and pole connections	10	125
Post and pole connections	6	686
Post and pole connections	4	235
Hyde Park.		
Harvard avenue and Maple street, Engine 48, house to Oak street	6	450
River street, Gordon avenue to Perkins avenue	6	833
Roxbury.		
Centre and Highland streets, Columbus avenue to Marcella street	6	1,063
Post and pole connections	10	295
Post and pole connections	6	55
Post and pole connections	4	60

Jamaica Plain and West Roxbury.

	Cond.	Feet.
Washington street, Kittredge street to La Grange street	10	7,003
Beech street, Washington street to Orange street	6	1,463
La Grange street, Centre street to Chapin avenue	6	786
Centre street, Spring street to Cass street,	6	1,363
Belgrade avenue, Walworth street to Pinehurst street	6	1,330
Post and pole connections	10	320
Post and pole connections	6	252
Post and pole connections	4	554

Brighton.

Chestnut Hill avenue, Wallingford road to Commonwealth avenue	10	2,711
South street and Commonwealth avenue, Chestnut Hill avenue to Foster street	6	1,246
Wallingford road, Chestnut Hill avenue to Commonwealth avenue	6	2,207
Kilsyth and Lanark roads, Colliston road to Sutherland road	4	1,140
Brighton avenue and St. Luke's road, Chester street to Commonwealth avenue	4	1,377
Post and pole connections	10	225
Post and pole connections	4	70

FIRE ALARM BOX POSTS INSTALLED WITH DUCT LENGTHS.

East Boston.

Saratoga and Swift streets	00

City Proper.

Shawmut avenue and Cobb street	14
Berkeley street and St. James avenue	103

South Boston.

Dorchester avenue near Old Colony avenue	12

Dorchester.

Hancock and Jerome streets. (Two ducts)	37
Hancock street opposite Bowdoin street. (Two ducts),	34
Hancock street opposite Trull street	16
Park and Marlowe streets	123
Washington and Normandy streets	20
Blue Hill avenue and Almont street	36
Babson and Tremont streets	50

	Feet.
River and Malta streets	19
Pleasant and Roach streets	31
Hyde Park.	
River street and Perkins avenue	28
Roxbury.	
Ruggles and Halleck streets	11
Sterling street at Madison square	44
Brookline avenue and Fullerton street	122
Huntington and Parker Hill avenues	23
Huntington and South Huntington avenues	22
South Huntington avenue and Heath street	16
South Huntington avenue, opposite No. 200	14
South Huntington avenue and Bynner street	22
Highland and Marcella streets	5
Jamaica Plain.	
Washington street, near Arborway	6
Hampstead road, opposite No. 26	14
West Roxbury.	
Belgrade avenue and Pinehurst street	29
Centre and Cass streets	38
Brighton.	
Chestnut Hill avenue and South street	5
Commonwealth avenue and Foster street	100
Commonwealth avenue and Wallingford road	37
Commonwealth avenue and Allston street	20
Commonwealth avenue and St. Luke's road	138
Sutherland and Lanark roads	33

FIRE ALARM BOX POSTS RESET.

Clarendon and Stuart streets (new location)	36
Charles and Mt. Vernon streets (new location)	45

Huntington avenue and Louis Prang street (new location).
Commonwealth avenue and Clarendon street (broken by auto).
Charter and Salem streets (broken by auto).
Boylston and Arlington streets (account of new subway).
Franklin and Federal streets (broken by truck).
Cooper and Endicott streets (broken by truck).
Berkeley and Marlboro streets (broken by truck).
Tremont and School streets (broken by truck).
North and Cross streets (broken by truck).
Brattle street, opposite Quincy House (broken by truck).
Dorchester avenue and Adams street (broken by truck).

Park and Henley streets (broken by truck).
Columbus avenue and New Heath street (account new grade).
Dorchester and Savin Hill avenues (broken by auto).

New Cable Test Posts Installed.

	Feet.
Kneeland street, near Washington street, 5 ducts	21
Brattle street, near Washington street, 5 ducts	31
Pearl and Milk streets, 5 ducts	10
Atlantic avenue and Edison alley, 3 ducts	65
Centre and Moraine streets, 2 ducts	15
Warren avenue and Front street, 1 duct	30

New Combination Cable and Bell Posts Installed.

Washington and Summer streets, 2 ducts	29
Court street, opposite Hanover street, 2 ducts	29

New Test Posts Replacing Old Posts.

Richmond and Commercial streets, city proper.
Washington and Dale streets, Roxbury.
Warren and Dudley streets, Roxbury.
Leonard and Adams streets, Dorchester.

New Conduits.

Bristol street, Harrison avenue to headquarters, 4 ducts	352
Highland street, Centre to Marcella street	567
Fremont street, Blue Hill avenue to Babson street	364
Babson street, Fremont street to Engine 19 house	171
Chestnut Hill avenue, South street to Commonwealth avenue	804
Wallingford road, Leamington road to Commonwealth avenue	435

Building Connections.

House of Good Shepherd	126
Engine 19 house	25
High Pressure Station No. 1, 2 ducts extended	74
High Pressure Station No. 2	210

New Pole Connections with Duct Lengths.

Bennington street, opposite Blackinton street	74
Centre street and Lochstead avenue	122
Centre and Eliot streets	145
Harris avenue, near Centre street	8
Huntington and Parker Hill avenues	156
River and Malta streets	30
Blue Hill avenue and Fremont street	10

	Feet.
Kilsyth and Colliston roads	105
Union street, near Winship street (extended)	151
Homestead street, near Walnut avenue (extended)	134

Manholes Rebuilt.

Chestnut Hill avenue, two.
Highland street, three.
Fremont street, one
Wallingford road, two.
Babson street, two.

Ducts Abandoned.

Pole Connections.

Bennington and Breed streets	58
Rutherford avenue and Chapman street	23
Front street, near Warren avenue	10
Centre street and Harris avenue	92
South street, near Anson street	20
Centre street and Columbus avenue	10
River street, near Blue Hill avenue	164
River street at Everett square	55
River street, near Gordon avenue	20
River and West streets	67
Chestnut Hill avenue and Wallingford road	95
Chestnut Hill avenue, near South street, 2 connections,	174

Post Connections.

River and Charles streets.	40
Stanhope street and Trinity place	160

Public Fire Alarm Boxes Established.

Box.	
1538.	Berkeley street and St. James avenue.
2335.	Ruggles and Halleck streets.
243.	Jamaicaway and Lochstead avenue.
2464.	Washington street, near Arborway.
2468.	Call and Boynton streets.
2476.	Eliot and Dane streets.
2611.	Belgrade avenue and Pinehurst street.
3198.	Washington and Normandy streets.
3294.	Park and Waldeck streets.
3547.	Blue Hill avenue and Almont street.
438.	Bunker Hill and Elm streets.
5115.	Commonwealth avenue and St. Lukes road.
5136.	Commonwealth avenue and Allston street.
5142.	Allston street and Boulevard terrace.
5176.	Commonwealth avenue and Foster street.
5293.	Dunboy and Hardwick streets.

Box.
7231. Dorchester avenue, near Old Colony avenue.
7417. East Eighth and Old Harbor streets.

Public School Boxes Established.

672. Curtis Guild School, Ashley street.

Private Boxes Established.

375. St. Raphael's Parochial School, Oak street.
2214. Lenox street carhouse — Boston Elevated Railway Co.

Public Boxes Relocated.

1547. From Stanhope street and Trinity place to Clarendon and Stuart streets.

2336. From Parker and Louis Prang streets to Huntington avenue and Louis Prang street.

Fire Alarm Boxes in Service.

Total number	1,237
Owned by the Fire Department	872
Owned by the Schoolhouse Department	206
Owned by the Auxiliary Fire Alarm Company	64
Privately owned	95

Department Boxes.

On fire alarm box posts	466
On poles	383
On buildings	19
Inside buildings	4
Equipped with keyless doors (bell-ringing attachment)	818
Equipped with keyless doors (glass guards)	47
Equipped with key doors	7
Equipped with auxiliary attachments*	14
Designated by red lights	429

Schoolhouse Boxes.

On fire alarm box posts	21
On poles	15
On buildings	101
Inside of buildings	69
Equipped with keyless doors	149
Equipped with key doors	57
Equipped with auxiliary attachments	160
Designated by red lights	20

* With auxilary connection to schoolhouses.

Auxiliary Fire Alarm Company Boxes.

On poles	6
On buildings	21
Inside of buildings	37
Equipped with keyless doors	9
Equipped with key doors	55

Private Boxes.

On poles	7
On buildings	24
Inside of buildings	64
Equipped with keyless doors	14
Equipped with key doors	81
Equipped with auxiliary attachments	2

Classification of Fire Alarm Boxes.

Academies	4
Armory	1
Asylums	4
Carhouses	5
Cemetery	1
Church	1
City Yard	2
Homes for aged people	19
Hospitals	2
Hotels	5
Manufacturing plants	26
Museum	1
Navy Yard	6
Office buildings	3
Police station	1
Power stations	5
Prison	1
Public Hall	1
Pumping station	1
Railroad shops	4
Railroad stations	5
Railroad yards	12
Retail stores	5
Restaurant	1
Schoolhouses (public)	206
Schoolhouses (parochial)	2
Stock yards	2
Street boxes (public) *	863
Theatres	28
Warehouses	8
Wharves	9
Wholesale houses	3

* About one hundred schoolhouses and private boxes are accessible to the public but are not counted as street boxes.

POSTS AND CABLE TEST BOXES.

Fire alarm box posts in service	487
Fire alarm box posts set, not in service	12
Test posts in service (large size)	69
Test posts in service (small size)	8
Pole test boxes in service	207

CIRCUITS.

Box circuits	65
Tapper circuits	14
Gong circuits	13
Special signal circuits	3
Telephone circuits in department system	52
Telephone circuits to Beach Exchange — New England Telephone and Telegraph Company	9
Telephone circuits to Back Bay Exchange — New England Telephone and Telegraph Company	1
Telephone circuits — special — to Police Headquarters,	1
Telephone circuits — special — to A. D. T. Co., office,	1
Telephone circuits — special — to Edison Electric Illuminating Company	1
Telephone circuits — special — to Boston Automatic Fire Alarm Company	1
Telephone connections to Boston Protective Company,	1

WIRES, CABLES AND CONDUITS.

Line wire in service	224 miles
Aerial cable in service	26 miles
Conductors in the same	154 miles
Aerial cable conductors in service	106 miles
Underground cable in service	160 miles
Conductors in the same	2,322 miles
Underground conductors in service	1,246 miles
Conduits owned by the Fire Department	65,938 feet
Ducts in Fire Department conduits	83,311 feet
Ducts in New England Telephone and Telegraph Company, system, used by Fire Department	584,378 feet
Ducts in Postal Telegraph Company system, used by Fire Department.	5,717 feet

FIRE ALARM APPARATUS.

Tappers in service	149
Boston tappers in adjacent cities and towns	6
Tappers connected to adjacent city and town systems in Boston Fire Department stations	5
Gongs in service	112
Registers in service,— other than fire alarm office	30
Relays in service,— other than fire alarm office	21
Telephones in department system	151

Public Clocks.

Because of a serious fire in the Old State House the clock movement in that building had to be removed and thoroughly overhauled and a new dial installed.

The dials of the tower clocks in the steeples of the Old North Church (four dials), the Old South Church (two dials), the West Roxbury Congregational Church (two dials) and the Baker Memorial Church, Upham's Corner (four dials) had all broken parts replaced and were painted at a cost, for all of them, of $551.60, excluding labor of our own force.

The tower clock in the Charles Street Church, which was out of service, on account of building construction for several months, was overhauled and repaired by our own force and again put in service.

In addition to the above, fifty reports of minor troubles in other public clocks were attended by our force.

Summary of Work Done.

New line used	43,870 feet
Old wire removed from poles	95,400 feet
Aerial cable installed	8,240 feet
Conductors in the same	37,710 feet
Aerial cable removed from service	1,450 feet
Conductors in the same	15,900 feet
Underground cable installed in ducts of New England Telephone and Telegraph Company	40,449 feet
Conductors in the same	319,466 feet
Underground cable installed in Fire Department ducts	12,726 feet
Conductors in the same	120,539 feet
Underground cable in Postal Telegraph Company ducts	1,364 feet
Conductors in the same	8,184 feet
Submarine cable installed	816 feet
Conductors in the same	7,464 feet
Total underground cable installed (new work)	55,355 feet
Conductors in the same	455, 653 feet
Cable used to replace defective cable	3,613 feet
Conductors in the same	135,078 feet
Underground cable removed	2,855 feet
Conductors in the same	15,610 feet
Conduits laid by the department	5,596 feet
Ducts in same	7,348 feet
Ducts abandoned	988 feet
Manholes built	9
Handholes built	1

Fire alarm boxes installed by this department,	18
Fire alarm boxes installed by Schoolhouse Department	1
Fire alarm boxes installed on private property,	2
Fire alarm box posts set	33
Fire alarm box posts relocated	3
Fire alarm box posts reset or replaced by new,	13
Fire alarm test posts set — large type	4
Fire alarm test posts set — small type	4
Fire alarm pole test boxes installed	17

GEORGE L. FICKETT,
Superintendent of Fire Alarm.

BUREAU OF SUPPLIES AND REPAIRS.

February 1, 1922.

From: The First Deputy Chief.
To: The Acting Fire Commissioner.
Subject: Annual Report, 1921–22.

The following presentation of the activities of the various branches connected with the Bureau of Supplies and Repairs for the fiscal year 1921–1922 is herewith submitted:

Motor Apparatus Repairs — Bureau Shops.

Number of jobs performed	4,606
Cost of labor and material on above	$51,152

This work consisted of all character of repairs on all types of motor-driven apparatus in the department, in many cases the entire mechanism being renewed or completely overhauled. It is to be noted here that in the repair of motor apparatus possessed by this department, for the most part very complicated, our Bureau forces handled the same in a most capable manner.

Motor Apparatus Repairs — Outside Concerns.

Number of jobs performed	410
Cost of labor and material on above	$4,202

Not possessing adequate facilities for the proper maintenance and repair of certain elements which go to make a motor vehicle, it was found necessary to resort to outside concerns for repairs, this work consisting of repairs to springs, fenders, windshields, wheels, magnetos, storage batteries, tires, innertubes, carburetors, electric horns, switches, etc.

Note.— All of our motor-driven apparatus has been through our shops for repairs or general overhauling — in some instances more than once.

Emergency Motor Squads.

We have assigned from our fire-fighting forces some ten members who render night and day service and are known as Squads No. 1 and No. 2. These men have

proven their ability to cope with most any condition which might exist in the operation and re-establishment of service in our motor-driven or horse-drawn apparatus. I know of no condition existing in the year 1921 in which they have failed to accomplish the task which they set out to perform.

New Motor Equipment.

The following new motor equipment were contracted for and received during the fiscal year 1921–1922:

American LaFrance.

Six (6) type No. 75 750 gallons' capacity pump and hose cars.
Two (2) type No. 12 1,000 gallons' capacity pump and hose cars.
One (1) type No. 17 four-wheel tractor.

Note.— All additions are placed on these apparatus by our shop forces in accordance with our standards.

Buick.

Two (2) five-passenger touring cars for deputy chiefs.
Four (4) roadsters for district chiefs.

White.

One (1) ¾-ton truck for repair shop service..

Ford.

Four (4) roadsters for emergency motor squad and shop service.

To my mind, the major principle involved in obtaining maximum efficiency for apparatus and equipment is standardization of type and class.

Motor Pump School.

The establishment of a motor pump school in this department is, as far as I am aware, the first school of its type in the country. Many members of the department have already attended in small groups, as it was found that more practical training could be given, and more individual instruction given where the classes were not so large. In addition to our own men, we have had as observers many members of outside fire departments.

Classes were conducted during the open weather, and will be resumed as soon as conditions warrant.

The men trained in this art have proved their efficiency many times over in the operation of our motor pumps,

especially during the extremely cold weather, which, in itself, is a most severe test. This being an innovation, the men under instruction have grasped the most intricate details with astonishing ease, and it tends to give confidence to the timid, and develops poise in the operator.

Information has been sought, on many occasions, by outside sources, who have come to realize the important part to be played by motor pumps in the extinguishment of fires. It is gratifying to know that, with this instruction we have developed a method by which a motor pump functions on all of its cylinders, rather than only a few, resulting in undeveloped operation.

Chauffeurs' School.

Under the direction of our Instructor of Motor Apparatus about two hundred officers and men have been given a thorough course of training in the care and operation of motor vehicles. Completing their course with the instructor, the men are turned over to the Engineer of Motor Apparatus for final test and approval, thus checking up their qualifications. In a vast majority of cases, excellent results have been obtained in the adoption of this practice.

Motor Vehicle Inspection.

Periodic inspection of each piece of motor apparatus in service is conducted by our Engineer of Motor Apparatus, he planning the time for inspection from the chauffeurs' reports which are received at this Bureau from time to time. Again, more frequent inspection is made of apparatus which have been subjected to exceptionally severe service. His findings are submitted to the First Deputy Chief, in charge of this bureau who, in turn forwards them to headquarters, from which source orders are issued for the correction of any defects which may exist.

In connection with the inspection of motor apparatus, all drive chains and anti-skid chains were inspected by a man detailed from this bureau for that purpose.

The Engineer of Motor Apparatus, in addition to his duties specified above, responds to multiple alarms of fire, at which time he notes particularly the workings of the various motor pumps in action.

Testing of New Apparatus Before Acceptance.

All of the apparatus purchased during the year was subjected to most severe tests in hill climbing, road work, turning radius and reverse movements. Cylinder compression tests by means of a gauge were made on all motors. Representatives of the makers, members of our department, and, in some instances, interested outside fire department officials have been present at these tests.

Miscellaneous.

With a view towards eliminating unnecessary delay by our apparatus in response to alarms of fire, we submitted sample of gasoline supplied this department under contract, to the Massachusetts Institute of Technology, where a comparative analysis was made with the latest specifications of the National Committee on Standardization of Petroleum Specifications, and needless to say, resulted favorably.

In an experimental test we ascertained the relative superiority of the cord constructed pneumatic automobile tire over that of the fabric constructed type. In order that we might arrive at a proper basis for comparison, we equipped six of our passenger type cars with cord tires of the most standard makes — five tires and innertubes for each car. A complete record of gasoline consumption, oil used, mileage made, and other data incidental to proper conclusions, were kept by the drivers. It is our desire to eliminate, so far as it is possible, the time lost in changing tires brought about through punctures, blowouts and imperfect construction.

We also equipped one of our motor combination hose and chemical cars with cord pneumatic tires in order to establish a comparision in the maintenance between that type and the solid tire equipment.

Repairs to Horse-drawn Equipment and Apparatus (Our Shops).

Number of jobs performed	619
Cost of labor and material on above	$4,983

Included in the above cost were the overhauling and repairing of steam fire engines, replacing of band brakes, repairing and replacing of springs, the renewal of channel irons and solid butt end tires, and repairs to service ladders.

Among the minor renewals and repairs coming within the scope of the above figures were the following: ladder rungs, axe handles, sledge hammer and rake handles, sharpening axes, repairs to harnesses, life belts, hose lines and fire hats.

Repairs to Horse-drawn Equipment (Outside Concerns).

Number of jobs performed	187
Cost of labor and material on above	$3,899

The above expenditure covers the repair and renewal of shutoff nozzles, chucks, suctions, extinguishers, couplings, etc., due to the fact that our shop does not contain the proper facilities for handling the same.

The upkeep of various department buildings was cared for by our corps of carpenters, painters, plumbers and steamfitters. Among other things, about two hundred twenty-seven lights of glass were reset, and worn sashes replaced with new ones. The necessary stock used in this work was obtained from reliable outside sources.

The cost of the above work is indicated in the following:

Number of jobs performed	1,260
Cost of labor and material on above	$31,511

When it was found that a repair job could not be handled by members of our force, the work was done by outside concerns.

The cost of this work follows:

Number of jobs performed	77
Cost of labor and material on above	$4,933

During the year material to the amount of $641 was supplied to various fire companies in the department for minor repairs to quarters to be performed by members of those companies who were particularly qualified to do the work.

At a cost of $3,540, mattresses and pillows were renovated and remade, chairs recaned, and new window shades furnished by outside concerns. Repairs to furniture is also included in this figure.

FURNISHINGS PURCHASED.

726 yards roller towelling.
56 dozen linen sheets.
14 pillows.
21 bedsteads.
50 dozen linen pillow slips.
100 bedspreads.
14 mattresses.
189 chairs.
50 pairs blankets.

HOSE DATA.

Hose Purchased and Condemned During Year.

Purchased.

	Feet.
Leading cotton	20,900
Chemical	500
1-inch deck	225
4-inch rubber suction	40½
Total	21,665½

Condemned.

	Feet.
Leading cotton	11,650
Leading rubber	250
Chemical	450
1-inch deck	225
Deluge	25
3-inch flexible suction	200
4-inch rubber suction	62
Total	12,862

Hose in Use and in Store During Year.

In Use.

	Feet.
Leading cotton	127,966
Leading rubber	1,750
Chemical	18,800
1-inch deck	900
4-inch rubber suction	1,428
3-inch flexible suction	612½
Deluge	662½
Total	152,119

In Store.

	Feet.
Leading cotton	7,700
Chemical	400
3-inch flexible suction	25
2½-inch rubber suction	40
4-inch rubber suction	112
Deluge	25
Total	8,302

PAINT SHOP.

In order that we might guard against the rapid depreciation of our fire-fighting apparatus, we have inaugurated in our paint shop an "endless-chain" system of apparatus painting. By this method we are enabled at all times to display, aside from a rugged, workable piece of apparatus, an attractive piece of apparatus.

Our house-painting forces have done much to prolong the life of our many department quarters, as it has been found more economical to apply an additional coat of paint here and there than to allow the property in question disintegrate to such a degree as to require complete rebuilding. In this manner a great saving has been effected.

Clothing Division.

In addition to the regular duties incumbent upon the members of the hose and harness shop of this Bureau, certain of these individuals are now engaged in the marking and distribution of uniform clothing which is furnished gratis to the members of this department.

Uniform parts of clothing are carefully examined, and if the same are found to be completely worn, orders are issued to the manufacturer holding the contract to furnish new parts. In this manner the men always appear neat, as the clothing and parts must conform to the provisions of specifications laid down in General Orders, thus making all uniform standard.

In due course the uniform overcoats are concentrated at District Headquarters, where they are examined preparatory to cold storage in accordance with a schedule established by the Committee on Clothing, composed of officers of the department.

Storeroom.

The installation of metal bins and compartments has done much to eliminate the loss of time in the selection of material located in the said bins. This is particularly true in emergencies when goods must be obtained at a moment's notice. Incidental to the installation of the said bins and compartments, much useless material has been disposed of and also much material has been salvaged for future use.

In connection with the metal bins and compartments above mentioned, stock cards are attached to each bin, from which one may readily ascertain the contents of each bin, thus assuring us of an ample stock on hand at all times, and eliminating the possibility of a shortage of any one commodity.

Machine Shop.

The purchase of a Brown & Sharpe Universal Milling Machine, a bench drill and a motor-driven valve-grinding machine, has not alone reduced our operating costs to an appreciable extent, but has resulted in the turning out of a finer grade of work. With the use of the machines above mentioned, we have attained accuracy to the one-thousandth of an inch, which feature is so all-important when the high cost of our major fire-fighting apparatus is taken into consideration.

Furthermore, we are not compelled to resort to outside repair concerns for much of our emergency jobs, as our repair forces have adapted themselves most efficiently in the use of the machines mentioned previously.

Tool Room.

The establishment of a new tool room on the machine shop floor in charge of a competent individual has done much towards eliminating a good deal of carelessness on the part of our shop forces in the care of tools used by them in the repair of apparatus, etc.

By means of a metal check system, each man who borrows an article from the tool room is held strictly responsible for its return.

Main Floor.

In order to accomplish repairs on apparatus in the least possible time, we have had erected on the main apparatus floor a number of wooden bins in which have been located standard sizes of bolts, nuts, screws, washers, etc. Thus it may be seen that these articles are readily accessible, and the men are not obliged to climb two flights of stairs to the stock room for material.

Conclusion.

Due to the systematic and efficient conduct of our repair shops, the present structure is gradually proving inadequate in so far as space is concerned. Looking into the future, it is my belief that means should be taken to provide for a larger shop, thus insuring more efficient maintenance which is necessary to care for the annual growth of our department, brought on by increased motorization and additional quarters.

What we lack in this department are proper storage facilities. Much of our material is distributed in different sections of the city, some times difficult of access, which means that we are using every available place under our jurisdiction to store material which must be used at a moment's notice.

Respectfully,

John O. Taber,
First Deputy Chief.

BOSTON FIRE DEPARTMENT, VETERINARY HOSPITAL.

Boston, February 1, 1922.

From: Veterinary and Supervisor of Buildings.
To: The Fire Commissioner.
Subject: Annual Report.

Sir,— The following is a statement of the whole number of horses in the service; those that were sold, transferred, died, destroyed, killed, pensioned, during the year ending January 31, 1922:

Total number on hand February 1, 1921	147
Total number on hand February 1, 1922	112
Horses sold	17
Horses transferred	4
Horses died	1
Horses destroyed	7
Horses killed	4
Horses pensioned	2
	35

Respectfully submitted,

Daniel P. Keogh, M. D. V.,
Veterinary and Supervisor of Buildings.

REPORT OF MEDICAL EXAMINER.

Boston, February 1, 1922.

From: The Medical Examiner.
To: The Fire Commissioner.
Subject: Annual Report.

Sir,— I respectfully submit the following report for the year ending January 31, 1922:

Number of cases of illness	384
Number of cases of injury	1,022
Number injured but remained on duty	760

Examinations.

And inspections at office headquarters	1,053
For appointment as provisional firemen (civil service)	48
For reappointment (as from war service)	1
Re-examination of *old pensioners* and medical report submitted	35
For appointment of men on probation	42
At homes of citizens injured by fire apparatus and medical report submitted	4
At engine houses of firemen, pulmotors and medicine chests and including visits at homes of firemen and to hospitals and examination of citizens and others injured by fire apparatus or other property controlled by the Fire Department	250

During the past year the general health of the men has been very good, as about the average number of cases of illness and injury have been reported and on file at this office.

The officers and men have been prompt in offering and performing "first aid" services to citizens as well as to firemen and should therefore be encouraged and commended.

It is pleasing and also praiseworthy to note that out of a record of 1,022 cases of injury on file, 760 men remained on duty and had injuries treated in quarters. The above clearly proves the faithful spirit of officers and men.

Deaths.

Name.	Date.	Cause.
Charles C. Shepard	June 21, 1921.	Cardio-vascular disease.
Francis E. Merrill	Aug. 8, 1921.	Strangulation.
Daniel B. McAlvin	Sept. 23, 1921.	Fractured skull and pelvis.

Respectfully submitted,

William J. McNally, M. D.,
Medical Examiner.

REPORT OF WIRE DIVISION.

From: Superintendent, Wire Division.
To: The Acting Fire Commissioner.
Subject: Annual Report.

I herewith submit annual report of the Wire Division of the Fire Department for the year 1921–1922.

The underground district for 1922 has been prescribed and advertised in accordance with the law, and is as follows:

Brighton.

Washington street, from Commonwealth avenue to Corey road.

Corey road, from Washington street to the Brookline line.

Wallingford road, from Chestnut Hill avenue to Commonwealth avenue.

East Boston.

Border street, from the North Ferry to Condor street.

Sumner street, from Maverick square to Border street.

Roxbury.

Zeigler street, from Warren street to Dearborn street.

Dorchester.

Dorchester avenue, from Peabody square to Pierce square.

Fuller street, from Dorchester avenue to Washington street.

West Cottage street, from Dudley street to Blue Hill avenue.

Back Bay.

Brookline avenue, from Commonwealth avenue, a distance of 1,890 feet to a point 150 feet south of the south line of Fullerton street.

Making a total distance of four miles of streets as provided by law.

The above streets were prescribed in accordance with chapter 196 of the Acts of 1921, which reads as follows:

[CHAPTER 196.]

An Act to Provide for Removing or Placing Underground Certain Wires and Electrical Appliances in the City of Boston.

Be it enacted, etc., as follows:

Section 1. In the month of January, in the year 1922, and in said month of each year thereafter, to and including

the year 1926, the Fire Commissioner of the City of Boston shall prescribe and give public notice thereof in at least two daily newspapers in said city, by advertisement therein, twice a week for two weeks in succession, of not more than four miles of streets in any one year, from which poles shall be removed and the wires buried underground, except such poles and wires as are excepted in chapter 364 of the Acts of 1911.

Sect. 2. The work for the years 1920 and 1921 heretofore prescribed under existing statutes need not be done, but any street or streets formerly included in the work prescribed for said years may be included by the Fire Commissioner in the future work to be done under this Act. The obligation to do any work prescribed under existing laws to be done in years before 1920, shall not be affected by anything in this Act contained.

Sect. 3. The powers conferred and the duties imposed upon the officer mentioned in said chapter 364, and other acts mentioned in said chapter, are hereby extended and said powers shall be exercised and said duties performed by said Fire Commissioner in each of the years 1922 to 1926 inclusive.

[*Approved March 20, 1921.*

The following data gives the details of the work done by this division:

During the year there were fifty-five fires and four manhole explosions due to electrical causes, the total loss being $744,725.60. Of this amount two car barn fires caused a loss of $669,514,82, and three other fires caused a loss of $71,835.30, leaving $3,375.48 for the other fifty fires. These fires have received the attention of this division.

All electrical construction which comes under the supervision of this Division has received attention.

No violation of the law relating to electrical construction has necessitated court action during the year.

The total income was $36,511.82.

Owing to the fact that the force of the Interior Division has been increased during the year by the appointment of three new inspectors, we have been able to detail two inspectors who will devote all their time to the inspection of old electrical installation in buildings, commencing with the work in the city proper.

During the year a new edition of the Rules and Requirements of the Fire Commissioner (Wire Division) has been issued.

EXTERIOR DIVISION.

The underground district for the year 1921 as prescribed under authority of chapter 196 of the Special Acts of 1916, comprised the following main and side streets:

Main Streets.

Washington street, Brighton, from Commonwealth avenue to Corey road.
Bunker Hill street, Charlestown, from Monument street to Auburn street.
Warren street, Charlestown, from Thompson square to Park street.
Washington street, West Roxbury, from Corinth street to Beech street.
Columbus avenue, Roxbury, from Centre street to Washington street.
Huntington avenue, Roxbury, from South Huntington avenue, northeasterly to a point 100 feet east of the easterly line of Vancouver street.

Making a total distance of three miles as provided by law.

Side Streets.

Corey road, Brighton, from Washington street to the Brookline line.
Wallingford road, Brighton, from Chestnut Hill avenue to Commonwealth avenue.
Zeigler street, Roxbury, from Warren street to Dearborn street.
Soley street, Charlestown, from Warren street, a distance of 200 feet.
Belgrade avenue, West Roxbury, from South street to Aldrich street.
Maverick street, East Boston, from Meridian street to Border street.
Chelsea street, East Boston, from Maverick square to a point 105 feet west of the westerly line of Brooks street.

Making a total distance of two miles as provided by law.

The above streets were prescribed for underground

construction on January 18, 1921, but chapter 196 of the Legislative Acts of 1921 approved March 30, provided that the underground work for the years 1920 and 1921 heretofore prescribed need not be done.

This gave the companies a chance to devote their energies to certain streets in the 1917, 1918, and 1919 underground districts where underground work had not been completed and in which poles and overhead wires were still maintained.

With a few exceptions, where work is now in progress, all streets in the 1917, 1918, and 1919 underground districts have been cleared of poles and overhead wires.

In the selection of new pole locations our engineers have accompanied the engineers of the various companies for the purpose of passing on such locations. All carrying poles standing in the streets are stencilled by this department for purpose of identification, and are plotted in atlases on file in our office. All poles standing in the city are inspected and tested yearly by the inspectors of this division and at the same time a general inspection is made of all overhead construction. This work is in addition to the regular inspection work necessary on account of new construction. Poles found to be leaning or in process of decay are reported to companies owning same and where conditions warrant it poles are condemned. During the past year the inspectors of this division reported one hundred and seventy (170) poles decayed at base and thirty-nine (39) poles leaning, or a total of two hundred and nine (209) poles, which were replaced by new poles or reset by the various companies at the request of this department.

Twenty-six (26) abandoned poles were also reported by our inspectors and were removed by the various companies at our request.

The following table shows the overhead work for the year from February 1, 1921, to January 31, 1922, inclusive:

Number of new poles set in new locations	245
Number of poles replaced, reset or straightened	505
Number of poles removed	367
Number of poles now standing in the public streets,	15,620
Number of defects reported	1,703
Number of defects corrected	1,445
(Other defects in process of correction.)	

Number of notices of overhead construction	23,239
Number of overhead inspections	46,066
Number of overhead reports	22,156
Amount of overhead wires removed by owners (in feet)	1,529,780

UNDERGROUND CONSTRUCTION.

The ducts used this year for the underground conduits of the drawing in system are of the following type:

1. Vitrified clay (laid in concrete).
2. Fiber (laid in concrete).
3. Iron.
4. Wood.

In side or residential streets, a small amount of special underground construction for electric light and power purposes of a type known as the "Split Fiber Solid Main System," has been installed during the year.

The electrical approvals for underground electrical construction numbered two thousand four hundred and sixty-three (2,463).

Number of inspections of underground electrical construction, seven thousand four hundred and twenty-nine (7,429).

Number of reports of underground electrical construction, two thousand five hundred and fifty-six (2,556).

Character of Cable Used by the Various Companies.

COMPANY.	Kind of Insulation.	Size.
Boston Elevated Railway Company	Rubber and paper.	No. 4–0 and 500,000, 1,000,000 and 2,000,000 C. M.
Charlestown Gas and Electric Company.	Varnished cambric and paper.	Nos. 4, 2, 1–0, 2–0 and 4–0.
Edison Electric Illuminating Company.	Rubber and paper.	Nos. 8 to 1,000,000 C. M.
Fire Alarm Branch (B. F. D.)	Rubber	4, 6, 10, 19, 37 conductor.
New England Telephone and Telegraph Company.	Paper	16 to 1212 pair.
Police Signal Service (B. P. D.)	Rubber	7 conductor.
Postal Telegraph Cable Company	Paper	15 and 25 pair.
Schoolhouse Commission (City of Boston).	Rubber	4 conductor.
Western Union Telegraph Company	Rubber and paper.	2 to 25 conductors. 6 to 75 pair.

Table Showing Underground Work for the Year 1921.

COMPANY.	Feet of Conduit.	Feet of Duct.	Feet of Cable.	Number of Manholes.	Number of Services.
Boston Elevated Railway Company,	9,055	50,311	97,708	31	15
Boston Low Tension Wire Association.	72	184	.....	1	1
Charlestown Gas and Electric Company.	5,410	30,912	43,173	29	8
Edison Electric Illuminating Company.	43,382	237,558	977,127	169	1,414
Fire Alarm Branch (B. F. D.).....	1,865	5,210	55,355	4	56
New England Telephone and Telegraph Company.	4,670	58,909	175,756	16	121
Police Signal Service (B. P. D.).....	.....	585	10,000	.....	9
Postal Telegraph Cable Company....	.....	.....	6,655	.....	.....
Schoolhouse Commission.....	.....	247	1,950	.....	2
Western Union Telegraph Company,	7,058	41,957	15,311	23	5
Totals.....	71,512	425,873	1,383,035	273	1,631

NOTE.— "Split Fiber Solid Main System" of the Edison Electric Illuminating Company is included in the above figures, comprising 11,581 feet of conduit and 22,780 feet of single duct; the main and feeder tube or armored cable of the same company are not included; 100 feet of main three-wire tube and 5,889 feet of three-wire armored service cable were laid during the year.

Table Showing the Amount and Distribution of Boston's Electrical Power, January 31, 1922.

COMPANY.	Total Rated Horse Power of Boilers.	Total Rated Horse Power of Engines.	Capacity of Incandescent Lamps in Kilowatts.	Capacity of Arc Lamps in Kilowatts.	Kilowatts of Motors.	Kilowatts, Mixed Loads.	Number of Stations.
Boston Elevated Railway Company....	43,772	207,970	3,400	5	334,710	74,110	17
Edison Electric Illuminating Company..	48,592	235,400	93,057	2,896	85,777	71,373	43
Charlestown Gas and Electric Company,	.....	*	*	163	7,100	*	1
Block Plant Electric Light Company...	350	300	60	.....	30	85	1
A. W. Barnes Steam Specialty Company,	620	400	105	.....	106	.....	1
Sudbury Building Plant.....	200	150	25	.....	32	.....	1
Hanover Street Trust.....	500	363	209	33	153	395	1
Totals.....	94,034	444,583	96,856	3,067	427,908	145,963	65

* Unknown.

INTERIOR DIVISION.

As provided by law there have been twelve hundred fifty-four (1,254) inspections made of theatres, places of amusement and public halls. Where defects are found the parties interested are notified. When not corrected within a reasonable time the company supplying current is notified to discontinue same.

During the year there were seven persons injured by electricity, three of the cases proving to be fatal.

Fires in interior of buildings	47
Fires on poles	8
Manhole explosions	4
Injuries to persons	7
Notices of new work received	14,438
Number of permits to turn on current	10,275
Number of incandescent lamps inspected	1,432,715
Number of motors inspected	9,634
Number of buildings in which wiring was completely examined	1,532
Number of inspections made	35,653
Defects reported	877
Defects corrected	411

(Other defects in process of correction.)

LIST OF WIRE DIVISION EMPLOYEES, JANUARY 31, 1922.

	Salary per Annum.
1 Superintendent	$3,000 00
1 Chief inspector	2,500 00
4 Inspectors	2,000 00
8 Inspectors	1,900 00
8 Inspectors	1,800 00
6 Inspectors	1,700 00
3 Inspectors	1,600 00
1 Inspector	1,500 00
1 Inspector	1,400 00
1 Permit clerk and inspector	1,800 00
1 Engineer	2,000 00
1 Chief clerk	2,000 00
1 Assistant chief clerk	1,900 00
1 Clerk and stenographer	1,600 00
1 Clerk	1,240 00
1 Clerk and stenographer	1,200 00
1 Clerk	1,200 00
2 Stenographers	1,200 00
1 Chauffeur	1,400 00
1 Stenciller	1,300 00
1 Driver	1,300 00
46	

STATEMENT OF APPROPRIATION AND EXPENDITURES OF THE WIRE DIVISION FROM FEBRUARY 1, 1921, TO JANUARY 31, 1922, INCLUSIVE.

Appropriation			$89,076 88
	EXPENDITURES.		
Salaries and wages:			
A–1.	Employees	$75,486 53	
F–7.	Pension roll	1,500 00	
B–1.	Printing	883 50	
B–2.	Postage	100 00	
B–3.	Advertising	126 70	
B–4.	Car fares, etc.	2,281 55	
B–12.	Premium on surety bond	6 00	
B–13.	Telephones	352 03	
B–14.	Repairs, radiator	7 75	
B–35.	Fees for chauffeur's license	2 00	
B–37.	Photo and blueprinting	2 05	
B–39.	Repairs to instruments, etc.	224 67	
C–4.	Tires, etc.	281 35	
C–13.	Tools	29 21	
D–1.	Office forms and stationery	1,813 26	
D–11.	Gasolene, etc.	453 15	
D–16.	Photographic material,	6 46	
E–10.	Testing wire	4 97	
E–13.	Auto parts and paint,	92 10	
Total expenditures		$83,653 28	
Balance in treasury		5,423 60	
			$89,076 88

LIST OF PROPERTY.— WIRE DIVISION.

1 1,500-volt Weston Direct Current Voltmeter.
5 300-volt Weston Direct Current Voltmeters.
2 300-volt Weston Alternating Current and Direct Current Voltmeters.
1 15-volt Weston Direct Current Voltmeter.
2 300-volt Weston Direct Current Double Reading Voltmeter.
1 120-volt Weston Direct Current Minature Type Voltmeter.
1 150-volt Weston Direct Current Minature Type Voltmeter.
1 500-volt Weston Direct Current Ammeter.
1 200-volt Weston Alternating Current Ammeter.
1 50-volt Weston Direct Current Ammeter.
1 15-volt Weston Alternating Current Ammeter.
1 1,500-volt Milamperes Weston Direct Current Mil-ammeter.
6 Bichloride of silver batteries, each 60 cells.
1 Queen testing set.
1 Touring car.
1 Runabout.
1 Ford truck.
2 Robes.
1 Blanket.
2 Cameras, complete.
Miscellaneous tools used in connection with overhead construction.
Draughting instruments.

Respectfully yours,

Walter J. Burke,
Superintendent, Wire Division.

THE DEPARTMENT ORGANIZATION.

Acting Commissioner, JOSEPH P. MANNING.
Chief Clerk, BENJAMIN F. UNDERHILL.
Chief of Department, PETER E. WALSH.
First Deputy Chief, JOHN O. TABER, in charge of Bureau of Supplies and Repairs.
Superintendent of Repairs, EUGENE M. BYINGTON.
Superintendent of Fire Alarms, GEORGE L. FICKETT.
Superintendent of Wire Division, WALTER J. BURKE.
Chief Operator and Assistant Superintendent of Fire Alarms, RICHARD DONAHUE.
Chief Clerk, Wire Division, FRANK H. RICE.
Veterinary Surgeon, DANIEL P. KEOGH.
Medical Examiner, WILLIAM J. MCNALLY.

CLERKS.

(Fire Department.)

James P. Maloney, Assistant Chief Clerk and Supervisor of Pay Accounts, Edward L. Tierney, Chief of License Division — Bureau of Fire Prevention, George F. Murphy, Daniel J. Quinn, Herbert J. Hickey, John J. Coholan, William J. Hurley, Nathan Cohen, Frank M. Fogarty, Charles S. Carroll, Thomas J. Murphy.

(Wire Division.)

William McSweeney, Timothy A. Connolly, Selina A. O'Brien, Mary E. Fleming, Mary Moran, Martin P. Cummings.

STRENGTH AND PAY JANUARY 31, 1922.

HEADQUARTERS.

		Per Annum.
1	Commissioner	$7,500
1	Chief clerk	2,500
1	Assistant chief clerk and supervisor pay accounts,	2,500
1	Medical examiner	2,100
1	Secretary and stenographer	2,000
1	Clerk	2,300
1	Clerk	2,000
1	Clerk	1,200
1	Assistant engineer (messenger)*	1,800
2	Hosemen (clerks)*	1,800
11		

* Detailed from Fire-fighting Branch.

FIRE PREVENTION BUREAU.

		Per Annum.
1	Chief License Bureau	$2,500
1	Chief inspector (lieutenant) *	2,300
1	Clerk	1,700
1	Clerk	1,200
1	Constable	1,400
14	Hosemen and laddermen (inspectors)*	1,800
19		

FIRE FIGHTING BRANCH.

1	Chief of Department	$5,000
3	Deputy chiefs	4,000
15	District chiefs	3,500
66	Captains	2,500
95	Lieutenants	2,300
1	Aid-to-chief (lieutenant)	2,300
1	Aid-to-Commissioner (private)	1,800
3	Engineers (marine)	2,000
52	Engineers	1,900
42	Assistant engineers	1,800
11	Assistant engineers	1,600
3	Assistant engineers	1,500
900	Privates:	
	621	1,800
	206	1,600
	26	1,500
	47	1,400
1,193		

BUREAU OF SUPPLIES AND REPAIRS.

1	Deputy chief in charge*	$4,000
1	Superintendent	3,500
1	Shop foreman	2,000
1	Lieutenant, foreman of hose and harness shop*	2,300
1	Auto engineer (engineer)*	2,200
1	Master plumber (engineer)*	1,900
1	Master carpenter (hoseman)*	1,800
1	Master painter	1,800
1	Foreman auto mechanics	1,800
1	Machinist (engineer)*	1,900
1	Inspector steam fire engines (engineer)*	1,900
1	Instructor high pressure system (engineer)*	1,900
12	Privates*	1,800
3	Privates*	1,600
1	Clerk in charge	1,900
1	Clerk	1,500
1	Clerk	1,200
2	Clerks (hoseman)*	1,800
1	Storekeeper*	2,000

* Detailed from Fire-fighting Branch.

		Per Week.
1	Engineer	$40 00
		Per Day.
3	Firemen	$5 50
2	Plumbers	5 40
1	Steamfitter	5 00
1	Leading painter	5 25
7	Painters	5 00
2	Wheelwrights	5 00
1	Leading machinist	5 25
3	Machinists	5 00
10	Auto repairers	5 00
1	Leading blacksmith	5 25
4	Blacksmiths	5 00
5	Blacksmith's helpers	4 25
3	Carpenters	5 00
2	Auto trimmers and harness repairers	5 00
1	Hose and harness repairer	4 50
1	Boiler repairer, iron worker and steamfitter	5 00
1	Vulcanizer	4 50
1	Chauffeur	4 50
2	Teamsters (7 days)	4 00
1	Laborer	4 00
1	Steamfitter (temporary)	5 00
87		

FIRE ALARM BRANCH.

		Per Annum.
1	Superintendent	$3,500
1	Chief operator and assistant superintendent	3,000
1	Supervising operator	2,300
3	Principal operators	2,300
2	Operators	2,200
6	Assistant operators	1,800
1	Assistant operator	1,600
15		

CONSTRUCTION FORCE.

1	Foreman	$2,700
1	Assistant foreman	2,200
1	Stockman	1,800
		Per Day.
1	Machinist (7 days)	$5 25
2	Machinists (7 days)	5 00
18	Cable splicers and wiremen, linemen and repairers	5 45

		Per Day.
1	Laborer	$4 00
1	Inside wireman (temporary)	5 60
41		

VETERINARY HOSPITAL BRANCH.

		Per Annum,
1	Veterinarian and supervisor of buildings and horses	$3,000
		Per Day.
3	Hostlers (average), 7 days	$4 00
4		

CHIEF OF DEPARTMENT.

PETER E. WALSH.

Headquarters, Engine House 26–35, Mason Street.

The Chief is in charge of the fire protection of the city, which is divided into three divisions, each commanded by a deputy chief, which are subdivided into fifteen districts, each commanded by a district chief.

DIVISION 1.

Deputy Chief, HENRY A. FOX.

Headquarters, Ladder House 8, Fort Hill Square.

This division comprises Districts 1, 2, 3, 4, 5.

District 1.

District Chief, FITZGERALD M. O'LALOR.

Headquarters, Ladder House 2, Paris Street, East Boston.

Apparatus Located in the District.— Engines 5, 9, 11, 31 (fireboat), 40, 47 (fireboat), Ladders 2, 21, Chemical 7.

District 2.

District Chief, WILLIAM E. RILEY.

Headquarters, Engine House 50, Winthrop Street, Charlestown.

Apparatus Located in the District.— Engines 27, 32, 36, 50, Ladders 9, 22.

District 3.

District Chief, CORNELIUS J. O'BRIEN.

Headquarters, Ladder House 18, Pittsburgh Street.

Apparatus Located in the District.— Engines 25, 38, 39, 44 (fireboat), Ladders 8, 18, Water Tower 3, Rescue 1.

District 4.

District Chief, EDWARD J. SHALLOW.

Headquarters, Engine House, 4 Bulfinch Street.

Apparatus Located in the District.— Engines 4, 6, 8, Ladders 1, 24, Water Tower 1.

District 5.

District Chief, Albert J. Caulfield.

Headquarters, Engine House 26–35, Mason Street.

Apparatus Located in the District.— Engines 7, 10, 26, 35, Ladder 17.

Division 2.

Deputy Chief, Walter M. McLean.

Headquarters, Engine House 22, Warren Avenue.

This division comprises Districts 6, 7, 8, 11.

District 6.

District Chief, James J. Caine.

Headquarters, Engine House 1, Dorchester Street, South Boston.

Apparatus Located in the District.— Engines 1, 2, 15, 43, Ladders 5, 19, 20.

District 7.

District Chief, Frank A. Sweeney.

Headquarters, Engine House 22, Warren Avenue.

Apparatus Located in the District.— Engines 3, 22, 33, Ladders 3, 13, 15, Water Tower 2.

District 8.

District Chief, Frank J. Sheeran.

Headquarters, Ladder House 12, Tremont Street.

Apparatus Located in the District.— Engines 13, 14, 37, Ladders 12, 26.

District 11.

District Chief, James F. McMahon.

Headquarters, Engine House 41, Harvard Avenue, Brighton.

Apparatus Located in the District.—Engines 29, 34, 41, 51, Ladders 11, 14.

Division 3.

Deputy Chief, Daniel F. Sennott.

Headquarters, Ladder House 4, Dudley Street.

This division comprises Districts 9, 10, 12, 13, 14, 15.

District 9.

District Chief, JOSEPH H. KENNEY.

Headquarters, Engine House 12, Dudley Street.

Apparatus Located in the District.— Engines 12, 21, 23, 24, Ladder 4, Chemical 10.

District 10.

District Chief, FRANCIS J. JORDAN.

Headquarters, Engine House 18, Harvard Street, Dorchester.

Apparatus Located in the District.— Engines 17, 18, 52, Ladders 7, 29.

District 12.

District Chief, JOHN N. LALLY.

Headquarters, Engine House 28, Centre Street, Jamaica Plain.

Apparatus Located in the District.— Engines 28, 24, Ladders 10, 23, 30, Chemical 5.

District 13.

District Chief, MICHAEL J. KENNEDY.

Headquarters, Engine House 45, Corner Washington and Poplar Streets, Roslindale.

Apparatus Located in the District.— Engines 30, 45, 53, Ladders 16, 25.

District 14.

District Chief, ALLAN J. MACDONALD.

Headquarters, Engine House 46, Peabody Square, Dorchester.

Apparatus Located in the District.— Engines 16, 20, 46, Ladders 6, 27.

District 15.

District Chief, JOSEPH A. DOLAN.

Headquarters, Engine House 48, Corner Harvard Avenue and Winthrop Street, Hyde Park.

Apparatus Located in the District.— Engines 19, 48, 49, Ladder 28.

FIRE STATIONS.

LOCATION.

LOCATION.	Number of Feet in Lot.	Occupied by
Dorchester and Fourth streets	8,167	Engine 1 and Ladder 5.
Corner of O and Fourth streets	4,000	Engine 2.
Bristol street and Harrison avenue	4,000	Engine 3 and Ladder 3.
Bulfinch street	6,098	Engine 4 and Tower 1.
Marion street, East Boston	3,265	Engine 5.
Leverett street	2,269	Engine 6.
East street	1,893	Engine 7.
Salem street	2,568	Engine 8.
Paris street, East Boston	4,720	Engine 9 and Ladder 2.
River street	1,886	Engine 10.
Saratoga and Byron streets, East Boston	10,000	Engine 11 and Ladder 21.
Dudley street	7,320	Engine 12.
Cabot street	4,832	Engine 13.
Centre street	5,713	Engine 14.
Dorchester avenue	2,803	Engine 15.
Corner River and Temple streets	12,736	Engine 16 and Ladder 6.
Meeting House Hill, Dorchester	9,450	Engine 17 and Ladder 7.
Harvard street, Dorchester	9,440	Engine 18.
Norfolk street, Dorchester	7,683	Engine 19.
Walnut street, Dorchester	9,000	Engine 20 and Ladder 27.
Columbia road, Dorchester	10,341	Engine 21.
Warren avenue	7,500	Engine 22 and Ladder 13.
Northampton street	3,445	Engine 23.
Corner Warren and Quincy streets	4,186	Engine 24.
Fort Hill square	4,175	Engine 25, Ladder 8 and Rescue 1.
Mason street	5,623	Engines 26 and 35.
Elm street, Charlestown	2,600	Engine 27.
Centre street, Jamaica Plain	10,377	Engine 28 and Ladder 10.
Chestnut Hill avenue, Brighton	14,358	Engine 29 and Ladder 11.
Centre street, West Roxbury	12,251	Engine 30 and Ladder 25.
521 Commercial street, on land of Public Works Department.		

Fire Stations.—Concluded.

LOCATION.	Number of Feet in Lot.	Occupied by
Bunker Hill street, Charlestown	8,188	Engine 32.
Corner Boylston and Hereford streets	5,646	Engine 33 and Ladder 15.
Western avenue, Brighton	4,637	Engine 34.
Monument street, Charlestown	5,668	Engine 36 and Ladder 22.
Corner Longwood and Brookline avenues	5,231	Engine 37 and Ladder 26.
Congress street	4,000	Engines 38 and 39.
Sumner street, East Boston	4,010	Engine 40.
Harvard avenue, near Cambridge street, Brighton.	6,112	Engine 41 and Ladder 14.
Washington street, at Egleston square	3,848	Engine 42 and Ladder 30.
Andrew square	5,133	Engine 43 and Ladder 20.
Northern Avenue Bridge	.....	Engine 44, fireboat.
Washington and Poplar streets, Roslindale,	14,729	Engine 45 and Ladder 16.
Dorchester avenue, Ashmont	4,875	Engine 46.
Adjoining South Ferry, East Boston	11,950	Engines 31 and 47, fireboats.
Harvard avenue and Winthrop street, Hyde Park.	9,450	Engine 48 and Ladder 28.
Church street	3,412	
Milton and Hamilton streets	14,475	Engine 49.
Winthrop and Soley streets	5,230	Engine 50.
Oak square, Brighton	9,889	Engine 51.
Corner Callender and Lyford streets	7,200	Engine 52 and Ladder 29.
Corner Walk Hill and Wenham streets	11,253	Engine 53.
Saratoga street, East Boston	9,300	Chemical Engine 7.
Friend street	1,676	Ladder 1.
Dudley street	3,923	Ladder 4 and Chemical 10.
Main street, Charlestown	4,290	Ladder 9.
Tremont street	4,311	Ladder 12.
Harrison avenue	2,134	Ladder 17.
Pittsburgh street, South Boston	8,964	Ladder 18 and Tower 3.
Fourth street	3,101	Ladder 19.
Washington street, Dorchester	6,875	Ladder 23 and Chemical 5.
North Grove street	3,918	Ladder 24.

Headquarters Building, Bristol street, 15,679 feet of land.

Water Tower No. 2 is in Headquarters Building.

OTHER BUILDINGS.

Repair Shop, 363 Albany street, 8,000 feet of land.

Veterinary Hospital, Atkinson street, 64,442 feet of land.

Coal station, Main street, Charlestown, 2,430 feet of land.

Coal station, old Charles River Bridge, on land of Public Works Department.

Building No. 11 Wareham street, used by the Fire Alarm Branch as workshop and storeroom, 8,500 feet of land.

Building No. 618 Harrison avenue, used as a department garage and repair shop and a school for chauffeurs and officers, 3,816 feet of land.

LEASED BUILDING.

About 800 square feet of shed on Sleeper street (New Haven Terminal Stores) used as a coal station.

CANNEL COAL STATIONS.

DIVISION 1.

DISTRICT.	Location.	Capacity. (Tons.)	Wagons.
1	Engine 11	12	1
1	Engine 40	20	2
2	Engine 36	35	1
2	Ladder 9	35	2
3	Sleeper street	45	3
3	Engine 38-39 (motor driven)		1
3	Ladder 18	1	
4	Ladder 24	16	2
4	Charles River avenue	50	2
5	Engine 26	20	
Total			14

DIVISION 2.

5	Chemical 2	35	3
6	Engine 2	20	1
6	Fourth street	40	2
7	Engine 33	25	1
8	Engine 13	40	1
8	Engine 14	10	1
8	Ladder 12	10	
8	Engine 37	20	1
11	Engine 29	7	1
11	Engine 34	7	1
11	Engine 41	10	1
Total			13

Division 3.

District.	Location.	Capacity. (Tons.)	Wagons.
9	Engine 12	5	1
9	Engine 21	6	1
9	Engine 23	5	1
9	Engine 24	7	1
10	Engine 17	3	1
10	Engine 18	5	1
12	Engine 28	20	1
13	Engine 30	9	1
12	Engine 42	9	1
13	Engine 45	9	1
14	Engine 16	5	1
14	Engine 20	7	1
14	Engine 46	4	
15	Engine 19	8	1
15	Engine 48	19	1
15	Hose 49	1	
Total			14

Apparatus in Reserve.

Motor-Driven.	*Horse-Drawn.*
9 Engines.	8 Engines.
4 Hose cars.	11 Hose wagons.
6 Ladder trucks.	5 Ladder trucks.
1 Water tower.	3 Chemicals.
9 Automobiles.	41 Fuel wagons.
1 Steam propelled engine.	3 Manure wagons.
30	71

Miscellaneous Apparatus.

1 Old Velie roadster (unfit for service) at Department Automobile School, being used for instruction purposes.
2 Old Ford delivery trucks (unfit for service) at Department Automobile School, being used for instruction purposes.
1 Old Robinson hose car being dismantled and parts being used for replacements on this type apparatus now in service in the department.
2 Old Buick roadsters (unfit for service). (Four-cylinder type.)

MARINE APPARATUS.

3 Fireboats.

APPARATUS IN SERVICE.

Motor-Driven.	*Horse-Drawn.*
36 Engines.	12 Engines.
36 Motor ladder trucks.	10 Hose wagons.
1 Steam propelled truck.	8 Ladder trucks.
26 Hose cars.	
3 High pressure cars.	
3 Chemicals.	
3 Water towers.	
1 Rescue car.	
1 Fuel car.	
1 Wrecker.	
1 School car.	
11 Delivery trucks.	
33 Automobiles.	
142	30

ENGINES.

NUMBER.	Built by	Put in Service.	Rebuilt by	Date.	Diameter of Cylinder.	Diameter of Pump.	Stroke.	Size.	Weight. (Pounds.)
1	American LaFrance 1,000-gallon pump.	Dec. 19, 1921	American LaFrance Company	1921	5½	.....	6	First.	11,500
2	Seagrave triple combination pump, 750 gallons.	June 29, 1917	Seagrave Company	1917	5¾	4¼	6½	Third.	13,500
3	Christie Tractor / American Fire Engine Company	June 16, 1917 / Jan., 1904	.....	.....	9	5½	8	First.	13,140
4	International Power Company	1907	.....	.....	8½	5	8	First.	10,220
5	American LaFrance Company motor pumper.	Jan., 1919	.....	1919	5½	.....	6	First.	11,300
6	Amoskeag Manufacturing Company	1870	American–British Company	1914	7⅝	4⅝	8	Second.	8,500
7	American Fire Engine Company	Feb., 1893	American LaFrance Company	1907	9	5½	8	First.	9,900
8	Christie Tractor / American LaFrance Company	July 5, 1917 / May 1907	.....	1907	9	5½	8	First.	12,980
9	Silsby Manufacturing Company	April, 1890	American Fire Engine Company,	1902	7	4½	8	Second.	9,150
10	American LaFrance tractor	Aug. 31, 1914	.....	June	.....	.....	.....	.....	14,500
	Silsby Manufacturing Company	April, 1886	American Fire Engine Company,	1914	8	4¾	8	Second.	8,900
	American LaFrance pumper	Sept. 3, 1920		1903	5½	.....	6	First.	11,300
11	American LaFrance triple pumper	July 3, 1914	.....	June, 1914	5½	.....	6	First.	11,200

Engines.— Continued.

NUMBER.	Built by	Put in Service.	Built by	Date.	Diameter of Cylinder.	Diameter of Pump.	Stroke.	Size.	Weight. (Pounds.)
12.....	International Power Company.....	Dec., 1911	American–British Company.....	1911	7⅞	4½	8	Second.	9,250
13.....	Clapp & Jones Manufacturing Company.	April, 1890	American Fire Engine Company,	1899	8½	5	7	Second.	9,150
14.....	American LaFrance combination pump-hose car, 750 gallons.	Dec. 19, 1921	American LaFrance Company...	1916	5½	.....	6	Second.	10,500
15.....	Amoskeag Manufacturing Company, Christie Tractor.....	July 30, 1920 July 30, 1920	J. B. Filleull & Son.....	1919	8½	5	8	First.	14,350
16.....	American LaFrance combination pump-hose car, 750 gallons.	Oct. 19, 1921	American LaFrance Company..	1921	5½	4½	6	Second.	10,500
17.....	Christie Tractor..... Amoskeag Manufacturing Company,	Jan. 7, 1916 1872	International Power Company..	1907	7⅜	4⅜	8	Second.	12,380
18.....	American LaFrance combination pump hose-car, 750 gallons.	Oct. 28, 1921	American LaFrance Company..	1905	5½	4	6	Second.	10,500
19.....	Seagrave Company. (Triple combination pumper.)	July 2, 1917	.....	1917	5¾	.....	6½	First.	16,420
20.....	American LaFrance combination pump hose-car, 750 gallons.	Oct. 29, 1921	American LaFrance Company..	1909	5½	4¼	6	Second.	10,500
21.....	Christie Tractor..... Amoskeag Manufacturing Company.	Jan. 12, 1916 Sept., 1870	International Power Company..	1907	7⅝	4⅜	8	Second.	12,560
22.....	Christie Tractor..... Manchester Locomotive Works.....	Sept. 15, 1917 Nov., 1896	.....	.....	7⅝	4⅜	8	Second.	12,340
23.....	American LaFrance pumper.....	May, 1920	.....	.....	5½	.....	6	First.	11,300

24	Amoskeag Manufacturing Company,	July, 1867	American Locomotive	1904	7⅝	4⅜	8	Second.	8,415
25	Christie Tractor American LaFrance Company	May 15, 1915 Dec., 1910			9	5½	8	First.	16,000
26	American LaFrance pumper	Dec. 10, 1920			5½		6	First.	11,300
27	Metropolitan Fire Engine Company,	May, 1920	American Fire Engine	1892	8	4¾	8	Second.	9,118
28	American LaFrance pumper	April 13, 1920			5½		6	Second.	10,500
29	American-British Manufacturing Company.	Jan., 1911	Department shops		7⅝	4⅜	8	Second.	9,250
30	American LaFrance combination pump-hose car, 750 gallons.	Oct. 18, 1921	American LaFrance Company	1921	5½		6	Second.	10,500
31	G. F. Blake Manufacturing Company.	1914			17	10	11	1 pump, 3,000 gallons.	104 tons.
32	Amoskeag Manufacturing Company,	June, 1907			7⅝	4⅜	8	Second.	9,100
33	Christie Tractor, new International Power Company	April 11, 1921 Feb. 1909			8½	5½	8	First.	14,240
34	Amoskeag Manufacturing Company,	Dec., 1869	American-British Company	1904	7⅝	4⅝	8	Second.	8,300
35	American LaFrance pumper	Dec. 10, 1920			5½		6	Second.	10,500
36	Christie Tractor International Power Company	Aug. 13, 1917 Nov., 1909		1917	8½	5⅛	8	First.	13,910
37	American LaFrance pumper	Oct. 18, 1920			5½		6	Second.	10,500
38	Manchester Locomotive Works (self-propeller).	June, 1897	J. B. Filleull & Son	1917	9½	5¾	8	Double extra first.	18,170
39	Christie Tractor Manchester Locomotive Works	May 10, 1917 June, 1901	American-British Company	1915	8½	5	8	First.	14,300
40	American Locomotive Company	Jan., 1906			8½	5	8	First.	10,350
41	American LaFrance pumper	Jan. 26, 1921			5½		6	Second.	10,500

Engines.—Concluded.

NUMBER.	Built by	Put in Service.	Rebuilt by	Date.	Diameter of Cylinder.	Diameter of Pump.	Stroke.	Size.	Weight. (Pounds.)
42	Christie Tractor. Amoskeag Manufacturing Company,	Sept. 17, 1920			7⅝	4⅝	8	Second.	13,000
43	Christie Tractor Amoskeag Manufacturing Company,	Dec. 20, 1915 Nov., 1867	American Locomotive Company.	1904	7⅝	4⅝	8	Second.	12,980
44	American Fire Engine Company	Aug., 1895			12¾ H. P. 18 L. P.	10	11	2 sets of pumps. 6,000 gallons.	178 tons.
45	American LaFrance Company. (Triple combination pumper.)	Aug. 2, 1914			5½		6	First.	11,540
46	American LaFrance pumper	Oct. 25, 1920			5½		6	Second.	10,500
47	G. F. Blake Manufacturing Company.	Aug., 1909			12 H. P. 22 L. P.	10	11	2 sets of pumps, 6,000 gallons.	179 tons.
48	Christie Tractor American Locomotive Company	Oct. 25, 1920 1920			7⅜	4⅜	8	Second.	12,100
49	Seagrave Combination hose and chemical car.	July 25, 1918		1918					12,000
50	American La France pumper	1919		1919	5½		6	First.	11,500
51	American LaFrance Company. (Triple combination pumper.)	July 12, 1920			5½		6	First.	12,000
52	American LaFrance Company. 750-gallon pumper.	Dec. 19, 1921	American LaFrance Company	1921	5½		6	Second.	10,500
53	Seagrave Pumper triple combination tion, 750 gallons.	Aug. 12, 1916	Seagrave Company	1916	5¾		6½	Second.	16,420

In Reserve.

NUMBER.	Built by	Put in Service.	Rebuilt by	Date.	Diameter of Cylinder.	Diameter of Pump.	Stroke.	Size.	Weight. (Pounds.)
113–T....	Christie Tractor. (American Locomotive Company.)	July, 1903	Manchester Locomotive Works..	1916	8½	5	8	First.	14,240
107–T....	Christie Tractor. (American International Power Company.)	July 28, 1915 / Feb., 1909	.....	.....	7⅛	4⅛	8	Second.	13,150
105–T....	Christie Tractor. (International Power Company.)	Feb. 1909	.....	1916	7⅛	4⅛	8	Second.	12,400
119–T....	Christie Tractor. (International Power Company.)	1916	.....	.....	7⅛	4⅛	8	Second.	12,400
104–P....	Robinson Fire Apparatus Manufacturing Company. (Triple combination pumper.)	Dec., 1914	.....	.....	6¼	.....	6¾	.....	16,000
125–P....	American LaFrance. (Combination pumper.)	Nov., 1919	.....	.....	5½	.....	6	.....	10,500
127–P....	American LaFrance. (Triple combination pumper.)	Feb., 1920	.....	.....	5½	.....	6	.....	11,500
137–P....	American LaFrance. (Combination pumper.)	1920	.....	.....	5½	.....	6	.....	10,500
146–P....	American LaFrance. (Combination pumper.)	Nov., 1921	.....	.....	5½	.....	6	.....	11,500

Horse-Drawn Engines (In Reserve).

Number.	Built by.	Put in Service.	Diameter of Cylinder.	Diameter of Pump.	Stroke.	Size	Weight. (Pounds.)
619	Amoskeag	1906	6⅞	4¼	8	Third.	8,500
2,367	Clapp & Jones	1907	9	5½	8	First.	10,000
721	Amoskeag	1890	6⅞	4¼	8	Third.	8,500
652	Amoskeag	1890	6½	4	8	Fourth.	8,000
964	Metropolitan	1890	8	4¾	8	Second.	9,000
665	Amoskeag	1900	6½	4	8	Fourth.	8,000
534	Amoskeag	1905	6⅞	4¼	8	Third.	8,000
808	Amoskeag	1907	8	5	8	First.	9,000

Hose Wagons (In Reserve).

Eleven (11) horse-drawn.
One (1) Seagrave combination hose and chemical (motor).
Three (3) American LaFrance combination hose and chemical (motor).

Ladder Trucks.

Number.	Built by	Put in Service.	Rebuilt by	Feet of Ladders.	Number of Ladders.	Weight. (Pounds.)
1	Seagrave 85-foot aerial American LaFrance, Type 17, 4-wheel tractor attached	1915 Oct. 31, 1921	Motor driven	386	Aerial.	23,030
2	Abbott-Downing Company	1899		439	12	10,800
3	Abbott-Downing Company	June 2, 1886	Department Repair Shops	472	14	9,450
4	American LaFrance Company (85-foot)	Sept. 28, 1914	Motor driven	331	Aerial.	21,040
5	Seagrave Company (75-foot)	June 20, 1917	Motor driven	339	Aerial.	25,130
6	Christie Tractor C. N. Perkins & Co	March 2, 1917 Aug., 1905		232	17	13,400
7	Robinson Fire Apparatus Manufacturing Company.	Dec. 9, 1914	Motor driven	267	12	12,000
8	American LaFrance Company (85-foot)	Sept. 23, 1920	Motor driven	404	Aerial.	20,000
9	Abbott-Downing Company	1884		367	15	10,040
10	American LaFrance Company	Oct., 1920	Motor driven	307	12	10,000
11	American LaFrance. (City service truck.)	May 5, 1913	Motor driven	397	14	10,050
12	Christie Tractor American LaFrance Company (75-foot)	April, 1915 April, 1891		300	Aerial.	17,630
13	Christie Tractor Fire Department Repair Shop (85-foot)	July 21, 1915 1907		317	Aerial.	16,600
14	Christie Tractor American LaFrance Company (85-foot)	June 5, 1917 1906		316	Aerial.	17,660
15	Christie Tractor American LaFrance Company (85-foot)	April 18, 1917 1911		335	Aerial.	18,000

Ladder Trucks.—Concluded.

Number.	Built by	Put in Service.	Rebuilt by	Feet of Ladders.	Number of Ladders.	Weight. (Pounds.)
16	Christie Tractor Fire Department Repair Shop	Dec. 21, 1915 Sept., 1888		298	15	13,440
17	Christie Tractor Seagrave Company (75-foot)	July 27, 1915 June, 1911		281	Aerial.	17,100
18	Christie Tractor Seagrave Company (85-foot)	May 21, 1915 April, 1910		362	Aerial.	17,025
19	Fire Extinguisher Manufacturing Company	Jan., 1898		172	8	6,937
20	Christie Tractor Charles N. Perkins Company	Oct. 27, 1915 Dec. 30, 1902		242	8	13,100
21	American LaFrance Company	Dec. 10, 1913	Motor driven	245	10	11,500
22	Christie Tractor Charles T. Holloway	June 11, 1917 Jan., 1898		207	9	13,500
23	American LaFrance Company	Dec., 1910		197	9	7,300
24	Charles T. Holloway	Oct., 1901		221	7	7,100
25	Christie Tractor Charles T. Holloway	April 24, 1917 April 25, 1900		166	7	13,440
26	American LaFrance Company	Nov., 1908		262	7	6,435
27	Charles N. Perkins	Nov., 1901		224	9	8,000
28	American LaFrance Company	Nov., 1920	Motor driven	366	12	10,000
29	American LaFrance Company	Jan. 23, 1913	Motor driven	263	10	8,900
30	American LaFrance Company	March 5, 1913	Motor driven	263	10	8,900

In Reserve.

Number.	Built by	Date.	Weight. (Pounds.
213–T	Christie Tractor Charles T. Holloway	1898	12,050
216–T	Christie Tractor Hunneman & Co	1874	8,000
217–T	Christie Tractor Waugh & Co	1872	15,200
224	American LaFrance Company. (75-foot aerial)	1919	26,000
225	American LaFrance Company. (85-foot aerial)	1919	20,000
229	American LaFrance Company. (85-foot aerial)	1919	20,000

There are also five (5) horse-drawn city service trucks, ranging in weights from 6,000 to 10,000 pounds. There are four (4) condemned city service trucks, awaiting disposition, two (2) at Ladder 12's quarters and two (2) at the Veterinary Hospital.

Chemical Engines.

Number.	Built by	Put in Service.	Remarks.	Capacity.	Weight.
				Gallons.	*Pounds.*
5	American LaFrance Company	May 14, 1913	Combination, motor driven	35	7,750
7	Seagrave Company	Feb. 5, 1917	Combination, motor driven	35	9,310
10	Seagrave Company	Feb. 10, 1917	Combination, motor driven	235	11,360

In Reserve.

Number.	Built by	Put in Service.	Remarks.	Capacity.	Weight.
				Gallons.	*Pounds.*
1	American LaFrance Company	Dec. 1910		100	5,400
2	Babcock Manufacturing Company	Sept. 27, 1876	Altered by Henman, 1886	100	4,880
3	Babcock Manufacturing Company	1873		100	4,700

Note.— Three horse-drawn chemicals to be sold.

Water Towers.

Number.	Built by	Put in Service.	Weight. (Pounds.)
1	American LaFrance Company	Oct., 30, 1912	14,600
2	Kansas City Fire Department Supply Company	May 17, 1890	10,000
3	International Company	Nov. 2, 1903	12,050
4 (Reserve)	Kansas City Fire Department Supply Company	Dec. 18, 1893	10,000

Towers are equipped with American-British Company tractors.

TOOLS AND MACHINERY IN REPAIR SHOP.

Blacksmith Shop.	Boiler Room.	Hose and Harness Shop.	Engine Room.	Wheelwright and Machine Shop.
5 forges.	3 vertical tubular boilers, each 75 horse power.	1 Buckley electric hose testing and expanding engine.	1 25 horse power steam engine cylinder, 9 by 31.	1 each engine lathes, with foot beds, 28 by 12; 16 by 12; 16 by 9; 14 by 8 and 14 by 6.
1 power hammer.	2 Blake boiler feed pumps.	2 electrically-driven sewing machines.	1 Knowles triplex pump for hose testing.	1 16 by 10 speed lathe.
1 gas tire heater.		Numerous tools and appliances for repairing hose and harnesses.	1 15 horse power motor.	1 16 by 10 wood lathe.
1 tire upsetter.			2 dynamos and engines which supply current to fire alarm and central station.	1 26 by 26 planer, 8-foot bed.
1 punch and shears.			1 Richardson-Phenix motor oil purifier (Model L).	1 planer, 16 by 29, shaper.
1 lever shears.				1 radial drill.
1 tire roller.				3 upright drills.
2 rubber tire setters.				1 wall drill.
1 bolt cutter.				1 circular saw.
1 fan blower.				1 band saw.
1 power hack saw.				1 boring and mortising machine.
				2 buzz planers.
				1 grindstone.
				Numerous small tools.
				1 Brown & Sharpe universal milling machine.
				1 motor-driven valve grinding machine.

Also tools for the repair of automobile apparatus.

Expenditures for the Year.

Personal service:		
Permanent employees	$2,404,600 10	
Temporary employees	1,021 35	
Unassigned	4,357 32	
		$2,409,978 77
Service other than Personal:		
Printing and binding	$132 06	
Postage	607 80	
Advertising and posting	87 15	
Transportation of persons	1,499 69	
Cartage and freight	546 69	
Hire of teams and auto trucks,	1,065 00	
Light and power	15,374 09	
Rent, taxes and water	934 36	
Premium on surety bond	15 00	
Communication	2,578 58	
Motor vehicle repairs and care,	9,726 29	
Motorless vehicle repairs	433 00	
Cleaning	9,889 65	
Examinations	325 00	
Expert and architect	833 00	
Stenographic, copying and indexing	25 00	
Towing	828 00	
Fees, service of venires, etc.	1,340 00	
Boiler inspection	169 00	
Photographic and blueprinting,	113 58	
General plant	41,410 86	
Horseshoeing and clipping	10,976 70	
		98,910 50
Equipment:		
Cable, wire, etc.	$20,803 47	
Machinery	2,386 90	
Electrical	5,982 48	
Motor vehicles	133,151 91	
Motorless vehicles	940 00	
Stable	2,757 61	
Furniture and fittings	5,879 39	
Office	780 42	
Library	66 45	
Marine	203 00	
Tools and instruments	37,389 64	
Wearing apparel	23,398 70	
General plant	2,869 72	
		236,609 69
Carried forward		$2,745,498 96

Brought forward			$2,745,498 96
Supplies:			
Office		$11,604 33	
Food and ice		899 21	
Fuel		98,816 45	
Forage and animal		22,413 78	
Medical, surgical, laboratory		294 46	
Veterinary		140 71	
Laundry, cleaning, toilet		3,371 35	
Motor vehicle		23,881 67	
Chemicals and disinfectants		2,343 72	
General plant		4,921 58	
Cloth		6,172 13	
			174,859 39
Materials:			
Building		$15,274 39	
Electrical		2,994 72	
General plant		31,662 61	
			49,931 72
Special items:			
Pensions and annuities		$234,636 49	
Workingmen's compensation		1,585 15	
			236,221 64
			$3,206,511 71
Wire Division:			
Personal service:			
Permanent employees		$75,486 53	
Service other than personal:			
Printing and binding,	$883 50		
Postage	100 00		
Advertising and posting	126 70		
Transportation of persons	2,281 55		
Premium on surety bond	6 00		
Communication	352 03		
Motor vehicle repairs and care	7 75		
Fees, service of venires, etc.	2 00		
Photographic and blueprinting	2 05		
General plant	224 67		
		3,986 25	
Carried forward		$79,472 78	$3,206,511 71

Brought forward . . .		$79,472 78	$3,206,511 71
Equipment:			
Motor vehicles .	$281 35		
Tools and instruments . . .	29 21		
		310 56	
		$79,783 34	
Supplies:			
Office	$1,813 26		
Motor vehicle . .	453 15		
General plant . .	6 46		
		2,272 87	
Materials:			
General plant		97 07	
Special items:			
Pensions and annuities . .		1,500 00	
			83,653 28
			$3,290,164 99

REMODELING HOUSE, ENGINE 26 AND 35.

Payments on account:		
Building partitions and replacing lockers; Contractor, Joseph Rugo	$17,762 25	
Blueprinting specifications .	47 71	
Advertising	10 45	
		$17,820 41

REMODELING HOUSE, ENGINE 28 AND LADDER 10.

Payments on account:	
Contractor, Burton M. Gwinn . . .	$4,998 00

RECAPITULATION.

Fire Department	$3,290,164 99
Remodeling House, Engine 26 and 35 . .	17,820 41
Remodeling House, Engine 28 and Ladder 10 .	4,998 00
	$3,312,983 40

INCOME.

Permits for fires in open spaces, fireworks, blasting, transportation and storage of explosives .	$11,073 25
Sale of old material	863 71
Carried forward	$11,936 96

Brought forward	$11,936 96
Sale of apparatus	322 50
Sale of badges	222 60
Changing wires, etc.	43 75
Damage to fire alarm posts and boxes	254 82
Sale of horses	835 00
Damage to apparatus	50 27
Sale of manure	81 75
Labor and material	194 52
Services of electrician	33 60
Coal penalty	1 32
	$13,977 09
Wire Division:	
Permits	36,625 20
	$50,602 29

Alarms, Fire Losses and Insurance.

Months.	Alarms Received. From whom.							Loss.		Insurance.		Alarms. Bell.			Alarms. Still.		Confined to Building.	Extended to Others.	Not in Building.	Out of City.	Damage None.	Damage Slight.	Damage Considerable.	Totally Destroyed.
	Members.	Police.	Citizens.	Telephone.	Automatic.	Unknown.	Total.	Buildings.	Contents.	Buildings.	Contents.	Fire.	False.	Needless.	Fire.	Needless.								
January	11	23	302	152	13	9	510	$290,389	$355,547	$2,640,192	$2,311,770	214	9	7	223	50	262	10	159	6	93	168	10	1
February	6	16	191	72	9	3	297	157,822	460,564	3,023,899	3,938,632	128	4	10	111	40	196	2	39	2	65	121	11	1
March	5	20	273	218	12	3	531	147,154	400,740	3,410,376	2,486,350	185	4	5	300	30	213	1	266	5	77	132	5	
April	11	11	216	127	12	8	385	100,100	258,377	2,989,353	3,362,908	160	10	14	163	30	184	3	134	2	59	119	9	
May	5	11	195	121	9	4	345	119,874	110,513	3,240,638	585,224	119	4	9	168	37	191	3	92	1	76	109	6	3
June	11	27	418	185	17	12	670	135,405	446,117	6,645,655	1,848,050	287	13	11	305	44	284	10	296	2	82	209	3	
July	8	22	220	108	21	14	393	70,272	78,946	4,098,885	847,000	131	15	15	162	56	182	....	107	4	60	119	3	
August	5	19	239	89	11	13	376	55,192	52,911	2,621,045	689,737	149	12	9	153	45	189	2	111	....	75	113	2	1
September	5	13	267	88	15	15	403	69,477	120,962	5,368,064	1,526,650	180	14	6	164	30	212	1	128	3	61	146	5	1
October	5	15	277	136	13	19	465	85,882	59,564	1,758,248	746,350	191	21	19	187	39	211	5	161	1	75	133	8	
November	2	12	225	85	12	9	345	60,696	76,970	3,172,454	645,400	159	11	9	121	36	211	....	66	3	78	127	6	
December	8	22	300	167	17	13	527	122,095	172,563	6,951,916	2,843,050	200	10	15	248	45	323	1	120	4	144	167	13	
Totals	82	211	3,123	1,548	161	122	5,247	$1,414,358	$2,593,774	$45,920,725	$21,831,121	2,103	127	129	2,305	482	2,658	38	1,679	33	945	1,663	81	7

CAUSES OF FIRES AND ALARMS FROM JANUARY 1, 1921, TO JANUARY 1, 1922.

Alarms, false, needless, bell and still	738
Alarms out of city	33
Automatic alarms, false and accidental	101
Automobiles	233
Brush, rubbish, etc.	1,117
Careless use lamp, candle,	81
Careless use matches and set by rats	433
Careless use pipe, cigar and cigarettes	450
Chimneys, soot burning	207
Clothes near stove	18
Defective chimney, stove-pipe, boiler	73
Electric wires, motors	139
Fireworks and firecrackers,	57
Gas jet and gas stove	74
Gasolene, naphtha, benzine,	10
Grease in ventilator	47
Hot ashes in wooden receptacle	66
Incendiary and supposed	33
Lamp upsetting, explosion,	24
Miscellaneous	227
Oil stove, careless use and explosion	50
Overheated furnace, stove boiler	94
Set by boys	129
Spark from chimneys, stove,	123
Sparks from locomotive engine	57
Spontaneous combustion	113
Thawing water pipes	17
Unknown	503
Total	5,247

1921.	FIRE EXTINGUISHED BY						
	Extinguishers.	Buckets of Water.	Chemical Engines.	Hydrant Streams.	Steamers.	Miscellaneous.	Citizens.
January	90	34	76	29	49	118	35
February	59	22	49	23	29	35	20
March	63	50	89	66	21	152	39
April	68	33	53	34	32	75	26
May	78	30	52	35	23	37	31
June	162	75	120	108	31	50	44
July	79	31	45	48	19	34	33
August	86	33	55	40	21	35	32
September	99	39	47	60	30	34	32
October	90	23	85	61	34	56	28
November	68	24	69	21	20	41	34
December	100	45	77	44	36	99	43
Totals	1,042	439	817	569	345	766	397

FIRES WHERE LOSSES EXCEEDED $15,000.

DATE.	Location and Owner.	Loss.
1921.		
Jan. 1	87–93 Albany street and 73 Harvard street, Standard Bottling and Extract Company *et al*	$113,136
Jan. 2	332 A street, Crown Cork and Seal Company *et al*	75,602
Jan. 3	80–86 Washington street, Wadsworth Howland *et al*	16,170
Jan. 12	208 and 210 Milk street and 105 Central street, M. F. Driscoll *et al*	22,669
Jan. 16	48–54 Canal street, C. C. Bailey *et al*	41,696
Jan. 16	400 Washington street, Brighton Congregational Church	88,418
Jan. 18	41 and 43 Fulton street, Italian Importing Company *et al*	42,585
Jan. 24	128–134 Harvard avenue, H. G. Anthony *et al*	38,506
Feb. 8	102–108 Massachusetts avenue, Newbury Shoe Company *et al*	32,454
Feb. 8	190 and 192 Lincoln street, Max Orlick	49,350
Feb. 20	Off Damon street, B. F. Sturtevant Company	39,017
Feb. 20	1 and 2 Blackstone street, Cuddihy Packing Company *et al*	37,914
Feb. 21	481 and 483 Neponset avenue, Boston Elevated Railway *et al*	277,532
Feb. 21	935 Washington street, M. Zeit and J. Masesco *et al*	17,916
Feb. 22	Rear 1250 Columbus avenue, Roessle Brewing Company *et al*	25,953
Feb. 26	12 Brookledge street, G. Morton	15,537
March 4	Amory street, Boston Elevated Railway *et al*	369,864
March 4	2148–2156 Washington street, Zonis Brothers *et al*	17,697
March 19	82 North street, Mohawk Packing Company	18,074
March 20	64 Endicott street, Zest Chocolate Company *et al*	39,401
April 11	361 Massachusetts avenue, Dr. C. Darlem *et al*	25,243
April 13	114–122 South street, W. B. Jones Leather Company *et al*	59,650
April 14	145–149 Kingston street and 30 and 32 Edinboro street, S. Goldstein *et al*	93,829
April 15	124–128 Summer street, Chandler & Barber Company *et al*	57,528
May 5	257–261 Maverick street, G. R. Hobbs *et al*	29,786
May 5	356 and 358 Atlantic avenue, Foster's Wharf Corporation *et al*	20,695
May 18	82–86 Fulton street, D. Goodnow *et al*	51,717
May 20	Deer Island, City of Boston	20,000
June 1	Dover Street Bridge, City of Boston	40,086
June 26	21 and 23 Stanhope street, Tower, Talbot & Hifer *et al*	17,481
June 28	67–71 South street, A. C. Ratchesky *et al*	430,501

Fire Losses.— Concluded.

DATE.	Location and Owner.	Loss.
1921.		
July 9.....	60–68 Chauncy street and 51 and 53 Bedford street, Weeks Real Estate Trust *et al*.....	$57,553
July 18.....	Off Hamblin street, Charlestown Gas and Electric Company,	29,258
Aug. 15.....	10 and 12 Farnham street, R. J. L. Snyder *et al*.....	18,411
Aug. 23.....	280–292 Commercial street, 311–319 North street, C. E. Cotting Estate *et al*.....	19,628
Aug. 28.....	68 Hudson street, St. John of Damascus Society *et al*.....	20,148
Sept. 19.....	113–117 Causeway street, New England Trust *et al*.....	60,722
Oct. 15.....	New Allen street and 1415 Hyde Park avenue, City of Boston,	21,000
Oct. 31.....	25–31 Essex street, Cosmopolitan Trust Company, Storage,	15,569
Oct. 31.....	10 Hampden street, Roxbury, Chadwick Boston Lead Company.....	18,508
Dec. 2.....	498–506 Commercial street, Bloom Wool Stock Company *et al*.....	27,607
Dec. 29.....	332 Washington street, F. L. Dunne *et al*.....	16,141
Dec. 29.....	114–122 South street, Burke Brothers, Inc., *et al*.....	23,345
Dec. 31.....	200 Hanover street, Daniels & Wilson *et al*.....	27,830

STATISTICS.

Population, January 1, 1922		Est. 821,907
Area square miles		47.81
Number brick, etc., buildings		32,731
Number wooden buildings		76,436
Fires in brick and stone buildings	1,569	
Fires in wooden buildings	1,127	
Out of city	33	
Not in buildings, false and needless	2,518	
Total alarms		5,247

FIRE LOSS FOR THE YEAR ENDING DECEMBER 31, 1921.

Buildings, loss insured		$1,251,780
Contents, loss insured		2,499,082
		$3,750,862
Buildings, loss not insured	$162,577	
Contents, loss not insured	94,693	
		257,270
Total loss buildings and contents		$4,008,132
Marine loss		$2,069

Yearly Loss for the Last Fifteen Years.

Year ending	February	1,	1908	$2,268,074
"	"	"	1, 1909	3,610,000
"	"	"	1, 1910	1,680,245
"	"	"	1, 1911 (11 months)	3,159,989
"	"	January	1, 1912	2,232,267
"	"	"	1, 1913	2,531,017
"	"	"	1, 1914	* 3,138,373
"	"	"	1, 1915	3,013,269
"	"	"	1, 1916	3,004,600
"	"	"	1, 1917	† 2,372,489
"	"	"	1, 1918	‡ 3,981,227
"	"	"	1, 1919	2,822,109
"	"	"	1, 1920	2,557,584
"	"	"	1, 1921	3,139,566
"	"	"	1, 1922	4,010,201

* Does not include marine loss of $1,116,475, steamship "Templemore."
† Does not include marine loss of $101,312, steamship "City of Naples" *et al.*
‡ Does not include marine loss of $75,660.
Note.— January loss, 1911, amounting to $165,001, deducted from previous year and included in calendar year January 1, 1911, to January 1, 1912.

Alarms for the Past Ten Years.*

Years.	Bell.	Still and Automatic.	Totals.
1921	2,359	2,888	5,247
1920	2,029	2,456	4,485
1919	2,733	2,690	5,423
1918	2,413	2,649	5,062
1917	2,252	2,526	4,778
1916	2,350	2,128	4,531
1915	2,847	2,590	5,437
1914	2,945	2,589	5,534
1913	2,594	2,322	4,916
1912	2,812	2,432	5,244

* Each fire is treated as having only one alarm.

Roll of Merit, Boston Fire Department.

James F. McMahon, District Chief.
Thomas J. Muldoon, Captain, Engine Company 16.
Thomas H. Downey, Captain, Engine Company 22.
Michael J. Teehan, Captain, Engine Company 24.
Edward McDonough, Captain, Engine Company 26–35.

Joseph P. Hanton, Captain, Engine Company 33.
Dennis Driscoll, Captain, Engine Company 37.
Frederick F. Leary, Captain, Ladder Company 3.
Henry J. Kelly, Lieutenant, Engine Company 32.
Timothy J. Heffron, Lieutenant, Ladder Company 9.
Michael J. Dacey, Lieutenant, Ladder Company 20.
John J. Kennedy, Ladderman, Ladder Company 13.
Martin A. Kenealy, Captain, Retired.
James E. Downey, Hoseman, Retired.

CHANGES FROM FEBRUARY 1, 1921, TO FEBRUARY 1, 1922.

Number of men appointed to fire force	47
All others	4
Resigned	7
Pensioned	12
Deaths	3
Pensioners died	17

MEMBERS PENSIONED FROM FEBRUARY 1, 1921, TO FEBRUARY 1, 1922.

Edward A. Burbank.
John W. S. Crossman.
Gustavus H. Nichols.
George H. Acres.
Philip P. Leahy.
James H. Meehan.
John B. McKay.
Garfield R. LaPlante.
Daniel F. McGillicuddy.
James P. Rose.
Francis W. Sweeney.
Jonathan M. Morris, fire alarm.

DEATH OF MEMBERS FROM FEBRUARY 1, 1921, TO FEBRUARY 1, 1922.

Charles C. Shepard.
Daniel B. McAlvin.
Patrick Crilley, Wire Division.

DEATH OF PENSIONERS FROM FEBRUARY 1, 1921, TO FEBRUARY 1, 1922.

William F. Seaver.
William A. Rathburn.
Michael J. Mulligan.
Dennis J. Hedrington.
Warren C. Stevens.
William J. Toomey.
John W. Gale.
George H. Acres.
Frank E. Merrill.
Andrew C. Scott.
John J. O'Neill.
James E. Griffin.
Stephen J. Ryder.
John H. Wright.
John R. Chapman.
Daniel F. Buckley.
John W. Murphy.

BOSTON FIREMEN'S RELIEF FUND.

September 20, 1921.

To the Members of the Body Corporate of the Boston Firemen's Relief Fund, Boston, Massachusetts.

Dear Sirs,— We hereby certify that we have audited the accounts of the Treasurer of the Boston Firemen's Relief Fund to the close of business August 31, 1921, and find them correct.

The deposits in the banks and the checks drawn thereon have been compared with the accounts received from the banks, and have been found to agree therewith, and are all properly entered on the books of the treasurer.

Income from all sources is accounted for. Payments are supported by proper vouchers or by paid checks, and the balance on hand at close of business August 31, 1921, is correct.

We examined the securities belonging to the fund, consisting of $167,000 City of Boston registered bonds; $8,000 Chicago, Burlington & Quincy coupon bonds; $54,100 Liberty Loan; $7,000 City of San Francisco Hospital; $13,000 City of New Bedford bonds, and certificates of stocks received from the estates of Anne Sargent and Franklin P. Hyde, also $1,000 war savings stamps.

We have seen a bond issued by the American Surety Company of New York to Henry J. McNealy, treasurer, for $25,000.

A summary of receipts and disbursements for the year ending August 31, 1921, is appended hereto.

Respectfully submitted,

Amos D. Albee Son & Co.,
Certified Public Accountants.

RECEIPTS AND DISBURSEMENTS FROM SEPTEMBER 1, 1920, TO AUGUST 31, 1921.

Receipts.

Balance September 1, 1920		$7,280 01
Amount received from ball fund		22,412 15
Interest on bonds	$7,273 75	
Less accrued interest paid	151 35	
		7,122 40
Interest on Liberty Loan bonds		2,372 12
Dividends on stocks		226 25
Interest on deposits		207 22
Donations		1,052 50
City of Boston bonds matured		10,000 00
Sale of American Telephone and Telegraph rights,		4 46
Sale of typewriter		12 50
		$50,689 61

Disbursements.

Death and sick benefits, gratuities, medical attendance and medicine,	$22,392 25	
Less refunds	327 85	
		$22,064 40
Salaries		675 00
Treasurer's bond		62 50
Box at International Trust Company's vaults,		10 00
Auditing, twelve months		180 00
Expenses, stationery, printing, etc.		684 25
Typewriter purchased		75 00
Legal services		2,227 20
Bonds purchased		19,437 90
		$45,416 25
Balance, Exchange Trust Company		5,230 55
Balance, American Trust Company		42 81
		$50,689 61

Respectfully submitted,

HENRY J. MCNEALY, *Treasurer.*

CITY OF BOSTON
PRINTING DEPARTMENT